

COMMERCIAL CAR JOURNAL

MAY 1961

CCJ

NEW

**FLEET
MANAGEMENT
REPORTS**

THE MAGAZINE OF FLEET MANAGEMENT

A CHILTON PUBLICATION

**CONSTRUCTION
SECTION**
follows page 116

FLEET RELATIONS

... OR HOW TO PUT ACROSS YOUR IDEAS

FLEET CAR

- 1. P.M. CONTROL**
- 2. COST CONTROL**

DO TIRE CORDS FAIL?

AUTOMATED BUS INSPECTION

BRAKE RATINGS AND GVW

**COMPLETE INDEX
PAGE 2**

WHITE

RECOGNIZES KYSOR SHUTTER BENEFITS

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Improved Fuel Economy

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Increased Engine Life

Can you afford to miss these
savings on your gas trucks?

THE WHITE MOTOR COMPANY
CLEVELAND 1, OHIO

February 1, 1961

Kysor Heater Company
Cadillac, Michigan

Subject: Kysor Air-Operated Radiator Shutters

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E. R. Sternberg, Chief Engineer



WHITE 9000T GASOLINE
TRACTOR, EQUIPPED WITH
KYSOR AUTOMATIC SHUTTERS



automatic Radiator Shutters

KYSOR HEATER COMPANY

CADILLAC, MICHIGAN

TYPICAL APPLICATIONS

LOOSENS AND LUBRICATES

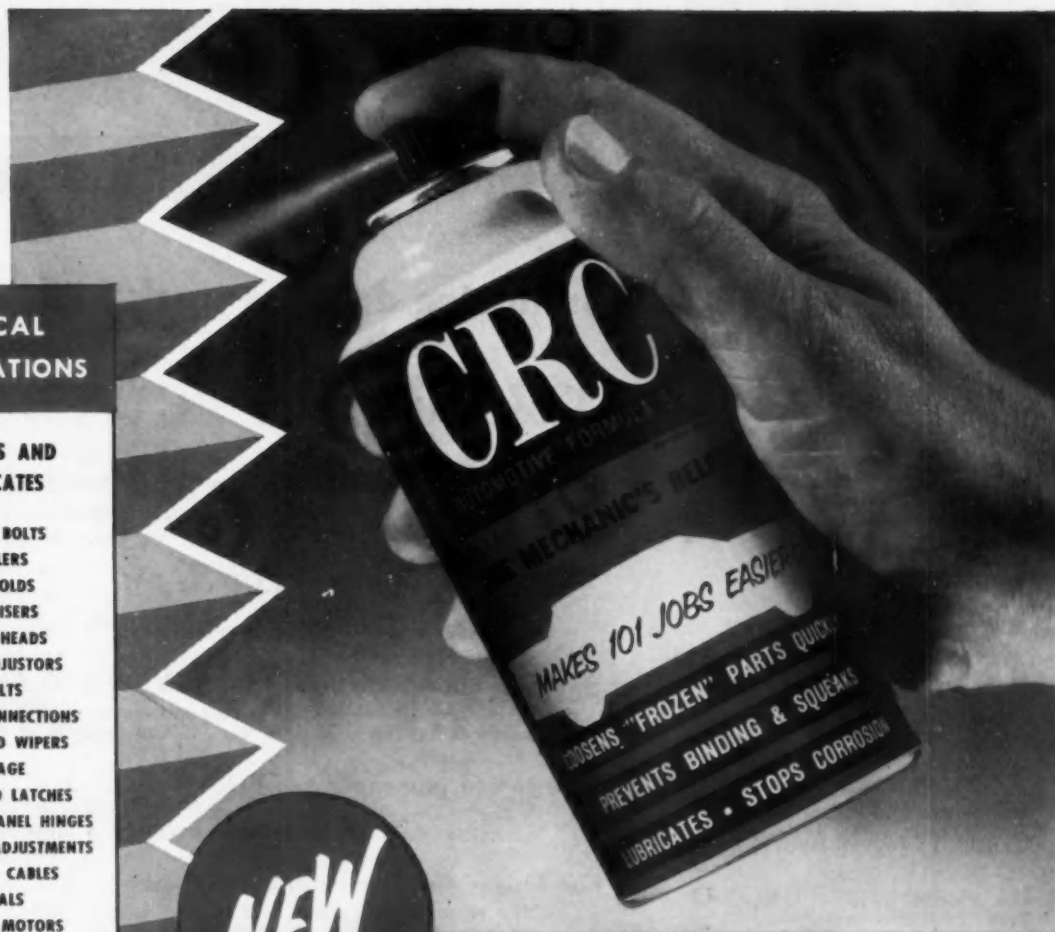
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DOOR AND PANEL HINGES
FRONT END ADJUSTMENTS
CONTROL CABLES
AERIALS
ELECTRIC MOTORS
AND COMMUTATORS

LUBRICATES AND ELIMINATES SQUEAKS ON

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BRAKE PEDAL PIVOTS
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CARBURETOR LINKAGE
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5-56

AUTOMOTIVE

SPECIAL: House Committee delivers truck highway tax**NEW
FLEET
MANAGEMENT
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MAY 1961

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With this issue

COMMERCIAL CAR JOURNAL begins a new service for fleet managers—top management, safety management, maintenance management in truck, passenger car and bus fleets.

It's the news-in-depth—not just reported, but presented with the fleetman in mind. Logically grouped (see column at far left), it will bring you, in the months ahead, what's significant in the fleet world.

Designed as a working tool, we intend to make it even better in the future. One thing we'll need to do this is your comment and advice. Drop us a line—or use the free reply card inside the back cover. Tell us what you think, how to make these new FLEET MANAGEMENT REPORTS of more use to you.

FEATURED in this issue is a six-page guide to effective communication. Its aim: To help you be more effective in getting your message and ideas across . . . boost your efficiency when you talk to employees or the public.

FLEET CAR control—both PM and cost—also gets six pages in this issue. Most of the new ideas and concepts presented apply to almost all fleets—truck and bus as well.

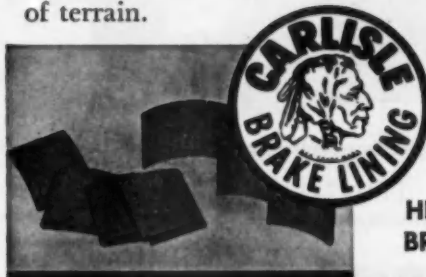
BUT THERE'S MUCH more, as a quick check of the contents listed at left shows. They're included because they have significance for today's fleet manager . . . because what they say is important to a fast-moving business.

And IN JUNE, you can expect equally timely articles . . . Engine heat control and its dollar value . . . accident costs and where they hide . . . painting complaints, causes and cures . . . maintenance intervals . . . money-making bus charter business . . . cost accounting that spots the lazy vehicle . . . plus a 50th anniversary special.

COMMERCIAL CAR JOURNAL, May, 1961

CUT YOUR BRAKE MAINTENANCE COSTS IN HALF!

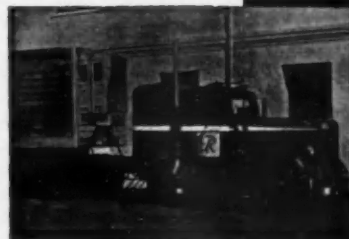
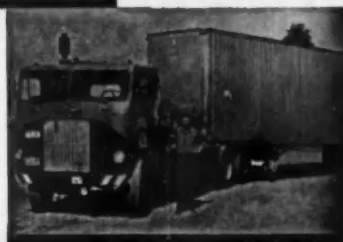
Largest fleet operators in the country report more dependable stopping ability plus 50 to 100% increase in brake life. Drivers report no fade and exceptional stability with greater safety for themselves and load over all kinds of terrain.



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PREMIUM
QUALITY
HEAVY DUTY
BRAKE BLOKS

“ Drivers report no fade on California ridge route with ability to stop anywhere.

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San Jose, California*



“ . . . have increased our brake mileage 100% . . . more dependable stops.

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The American Temperature Recorder continuously and accurately senses and charts the air temperature in any refrigerated carrier *as a function of time*. The circular chart is rotated once in 7 days by its own drive, so the most minute fluctuations in temperature are recorded. Road shock and sustained vibration do not affect the American Temperature Recorder.

Also available are dial-type American indicating thermometers that permit "on sight" temperature readings. A number of these thermometers can be installed virtually anywhere on any refrigerated carrier to provide desirable check points.

Keep accurate temperature records from pick-up, through hauling, to final delivery of payload. Choose American, the thermometers with a history of reliable service dating back to 1850. Write for details.

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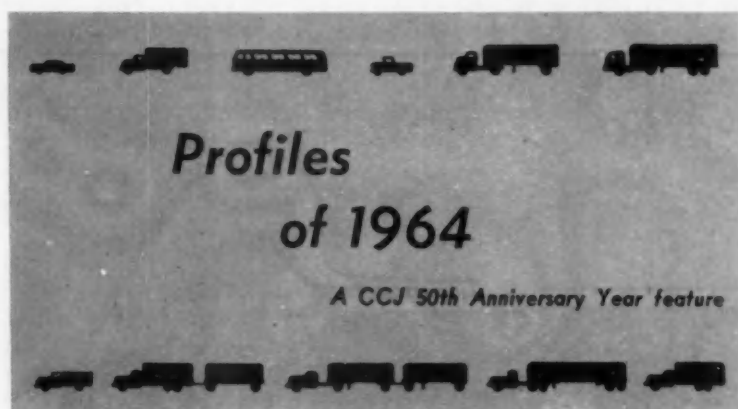
For Business Staff, see Advertisers Index

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COMMERCIAL CAR JOURNAL, May, 1961



Beginning: A Specific Look Ahead

THIS IS THE start of a new series of short-range forecasts. It will look specifically at what the nation's motor vehicle fleet will be like in 1964—only three years from now.

These reports are part of CCJ's 50th Anniversary Year Program. In future months, you'll find detailed forecasts covering specific major trends in vehicle types and their use.

But this is only a part of CCJ's 50th Anniversary Year Program. Now in production, CCJ's 50th Anniversary special—"The Golden Years of Highway Transportation"—will be the most colorful, fact-filled review of this industry ever presented. It will be in addition to the regular September issue. In it, you'll find the "why" behind the trends shown in these profiles—and others.

Now let's look at 1964.

Basic make-up of the nation's fleet as compared with 1957 is shown in the table. Only the simplest patterns are apparent. Even so, the expected sharp rises for tractor with semi-trailer and tractor with semi- and full-trailer combinations are worth noting.

There'll be other changes. Equipment will get bigger, combinations will replace straight trucks, more diesels may be used (depending on new tax proposals). There will also be shifts in types of equipment being used by private, for-hire and government fleets. Details of these changes will be covered in future reports in this series.

These are not "guesstimates." Data for these reports is based on material compiled by the Bureau of Public Roads, U. S. Department of Com-

merce, for the national Highway Cost Allocation Study.

Registrations for 1957 are BPR estimates. They stem from vehicle classification studies made in 1956 and 1957. In these studies, state registration records were supplemented by extensive surveys of fleets. Together, these studies make up the most comprehensive analysis of the nation's

fleet since the nationwide truck and bus inventory of 1941.

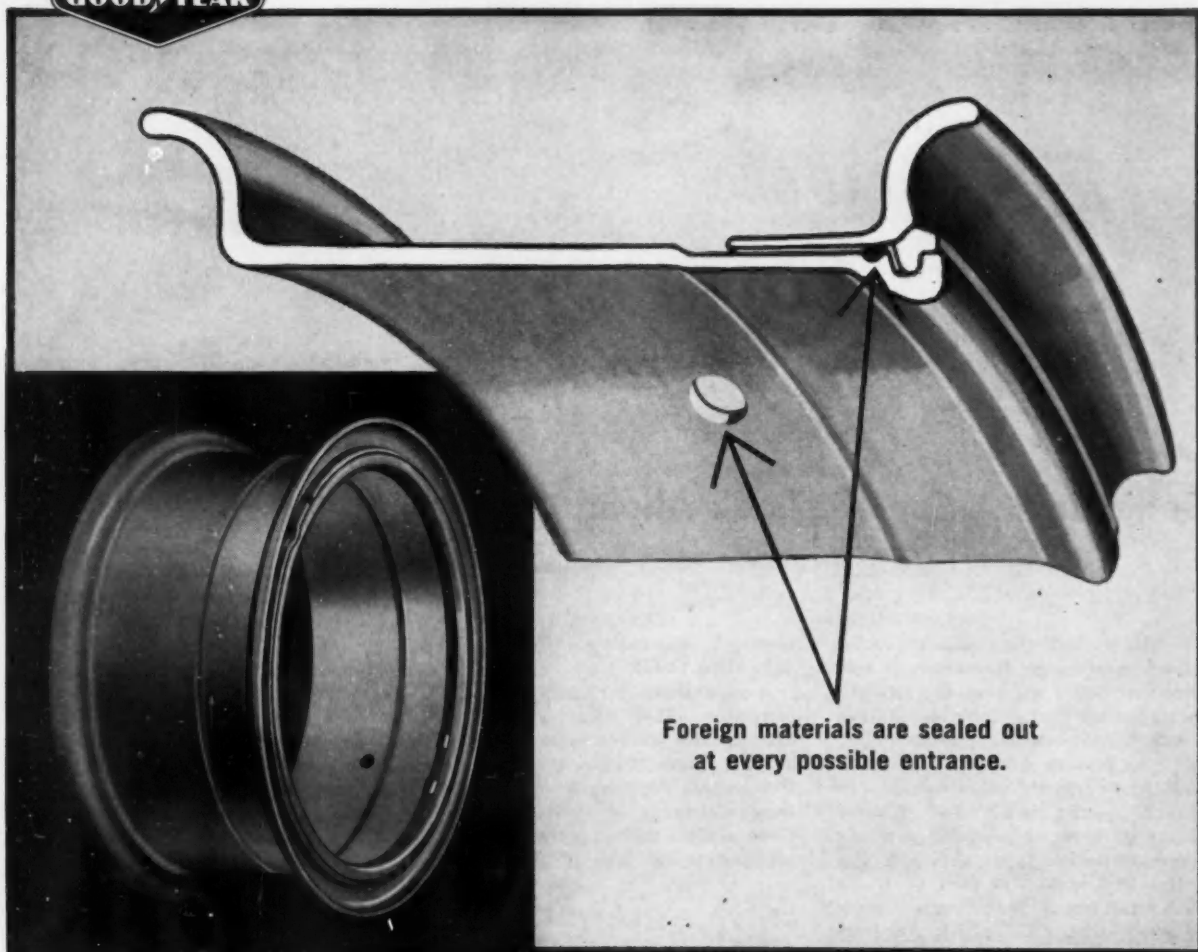
Estimates for 1964 were made by BPR too. They were based on the '56-'57 studies and on forecasts of future registrations made in all states by highway departments and other state agencies.

Military vehicles have been excluded from these estimates. Vehicles registered in Alaska and Hawaii have also been omitted. In 1964, these two states are expected to have a total of 260,530 automobiles, 1422 buses, 59,999 single-unit trucks and 1218 combinations.

How the nation's fleet will grow

Vehicle Type	Registered in 1957	Estimate for 1964	Change (per cent)
(Military vehicles excluded)			
Automobiles	55,906,195	70,583,224	+26.3
Buses	256,625	277,353	+ 8.1
Single-unit trucks	10,326,673	12,604,759	+22.1
Combinations			
With semi-trailers	547,871	747,175	+36.4
With full trailers	68,795	72,289	+ 5.1
With semi- & full trailers	17,475	25,067	+43.4
Total, all combinations	634,141	844,531	+33.2
Total, trucks and combinations	10,960,814	13,449,290	+22.7
Total vehicles	67,123,634	84,309,867	+25.6

Source: Bureau of Public Roads



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JOB-MASTER RIMS KEEP CORROSION AND EROSION TO A MINIMUM through their exclusive rubber sealing ring and round valve hole. And you get added protection—before and during use—from another exclusive: Baked-on, super-corrosion-resistant Bond-A-Coat finish. Results: Much longer rim life, much longer tire life.

NOTE THIS TOO: Only Job-Master offers all these additional features • 3° tapered bead seats for full support of *both* beads—virtual elimination of bead

chafing • Integral flange and bead seat for better balance and alignment • Industry's closest manufacturing tolerances—minimizes lateral and radial runout • Standard 28° bevel for full interchangeability with existing equipment.

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GOOD YEAR

Job-Master—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

Inherent Rights Are Kaput!

YEARS AGO the canal boat operators thought they had a monopoly on intercity freight. When the railroads came along the canalmen started screaming about "inherent rights." Later, when the trucks started rolling, the railroads did the same thing.

Now, a half century later, a grown-up trucking industry is in danger of falling into the same trap. This time, challenged not by a new form of transportation but by more efficient old ones, the cry of inherent rights crops up again. It comes from both management and labor.

Here's a specific case in point: Last month among the cherry blossoms in Washington there was a station wagon that had been delivered by rail. Plastered all over it were signs about idle trucks and drivers out of work because the car had come by rail. In this case, the union wanted its inherent rights protected by legislation or executive action.

Such an incident should help make us realize that there is no such thing as "inherent rights" in the field of transportation. They cannot and should not be protected by legislation or executive order. As Chairman Hutchinson of the ICC put it recently. . . .

"The government cannot make the carriers strong and prosperous. But a prosperous economy can make the carriers and the Government

strong. . . . So it is not a question of what the Government can do for transportation, but rather what transportation can do for our people."

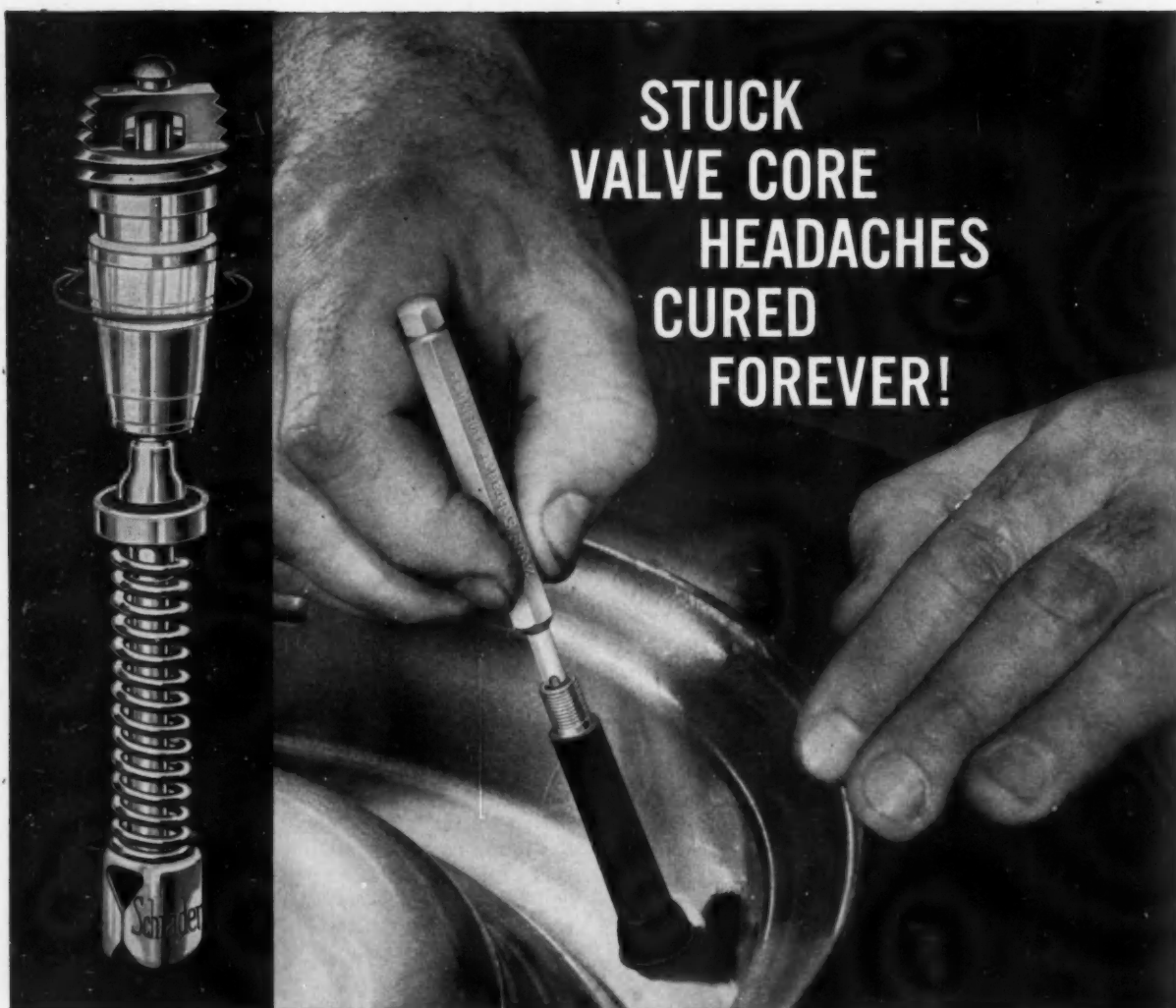
True enough, the trucking industry is facing real problems, must always fight for what is fair. But let's not confuse inherent rights with inherent advantages such as the low cost of waterways, the long-haul efficiency of the rails and the flexibility of trucks.

Nor should we confuse inherent rights with the problems of inequitable laws. In that category fall such items as the excise tax on new trailers and containers (as opposed to none on box cars) or the transportation tax on common carriage (as opposed to none for private carriers).

But if the station wagon can be delivered at lower *total cost* by rail . . . it should be . . . even though it hurts and hurts deep. The BIG question is: Can it be? That's where research, a careful study of all the costs, good honest salesmanship and action to correct inequities come into play.

But inherent rights should not enter the picture. For the economy of the nation has never been strengthened and never will be strengthened by attempts to protect the "rights" of one form of transportation over another.

Bart Rawson
Editor



STUCK VALVE CORE HEADACHES CURED FOREVER!

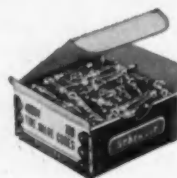
Good news for fleets! New Swivel-T Valve Cores come out clean...make most positive air seal ever!

Take advantage of Schrader's Swivel-T Valve Cores and improve your flat-catching program. The Swivel-T can't stick! Makes the best seal! Won't ever break off in the valve stem! Assures faster, better service for your vehicles.

Look for the white washer. This Swivel-T sealing gasket is made of Teflon—slipperiest substance known. Its built-in lubrication makes it self-swivelling, and it shrugs off oil, water, acids. Temperatures from -100°F . to 500°F . don't faze it. Slides in and out like magic, leaving valve walls clean.

When you gauge tires daily and keep accurate pressure records, the Swivel-T can be an important part of your program to avoid trouble on the road. Your supplier has them in stock. Order them by name... they cost no more than previous Schrader cores.

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Bulk boxes of
100 cores



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100 cores

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CCJ FLEET MANAGEMENT REPORT—MAY 1961

News
for fleet
management

New feature for **CCJ** readers starting this month brings you fleet news . . . written for **fleet management**. It's grouped by such logical headings as Trucks, Fleet Cars, Buses, Vehicles & Equipment, Laws & Regulations, Maintenance, Safety and New Ideas. You'll find the facts you **need to know** . . . briefed for quick reading.

Trucks

A special report reveals the **cost pattern** that took the **guts** out of common carrier 1960 revenue. Along with it: Some ideas on what can be done to **cut costs** in 1961 . . . How Small Business Administration is helping some fleets **find loan funds** at 4½ per cent . . . Plus definitive statistics on **long term leasing vs. daily rental** of trucks, trailers and cars from Dept. of Commerce. See page 13.

Fleet cars

If **cab fleets** turn to **longer-life diesel** engines, will bodies stand up? Here's one answer as reported to Philadelphia Yellow Cab fleet . . . Used as a guide by many fleet managers, American Automobile Assn. has just released its 1960 **road breakdown** analysis. See page 17.

Buses

Federal-aid for **urban transit** gets serious attention from the new Administration. Right now it's the fact-finding stage . . . After considerable testing, Niagara Frontier Transit is going fleet-wide with **two-way radio** installation. See page 21

Vehicles &
Equipment

American President Lines is putting Fruehauf's "Twin 20" **trailer/container** system into **effective** use . . . Tyrex vs. nylon: How **big a bite** is each taking in the commercial tire market? . . . They're field testing **metallic** brake linings. See page 25.

Laws &
Regulations

President Kennedy's team is backing **higher taxes** on trucks, say **only alternative** is a boost in gas tax . . . The fight's on: Who's going to have major **control of ICC**—the President or Congress? . . . Truck weight **increase** in Utah **blocked** by federal highway law. See page 29.

Maintenance,
Safety &
New ideas

Also you'll find new maintenance tips on page 81 . . . a new set of **standard accident definitions** on page 83 . . . and some new ideas you might be able to make work to your advantage on page 85.

Meetings

And don't forget to check **your fleet calendar** (page 87), especially American Transit Assn's Executive Conference—May 23-25 . . . Society of Automotive Engineer's Summer Meeting—June 4-9 . . . National Freight Claim Council's Spring Meeting—June 12-15.

In thousands of units, except bus sales are in actual numbers	New Truck Registrations		Truck Factory Sales—Domestic		Trailer and Trailer Chassis Shipments		Bus Factory Sales—Domestic		Truck and Bus Tires			
									Replacement Shipments		Original Equip. Shipments	
	Feb.	2 Months	Feb.	2 Months	Feb.	2 Months	Feb.	2 Months	Feb.	2 Months	Feb.	2 Months
1961	....	....	67.7	135.1	3.4	6.7	196	474	569.2	1204.5	266.6	618.6
1960	89.6	127.8	102.3	196.5	6.4	12.6	241	579	792.0	1618.1	427.6	948.6

Now— New Conventional Models in the Famous **IH** 400 Series!



MODEL D-405 with aluminum cab, frame and wheels—10,325 lbs. ready for the road!

New **INTERNATIONAL D-405 Conventional Models** slash down-time to the bone! You can get at the whole front end in seconds — engine, steering system, clutch control and springs. And beneath the lightweight hood and fenders, you'll find the same quality components that do such a great job in the famous **INTERNATIONAL DCO-405** cab-over-engine models.

In both single and tandem axles, the eight models in this new Series give you a custom-engineered, custom-built, heavy-duty family that will meet hauling demands anywhere in the country. Here's *true* **INTERNATIONAL** quality in lightweight design for your tractor operations.

In addition to all-welded cabs, here are just a few of the new design features...

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*...with hood and fenders
that tilt forward to make it
the easiest-to-service design yet*



*With the pull of one hand
the one-piece fiberglass hood and fender
assembly tilts forward a full 90 degrees.*

- Two front axle positions. 28 in. from bumper to front axle for bridge formula states, increasing payload up to 1600 lbs. Set back to 48 in. for heavy front axle loading, it also increases payloads in non-bridge formula states.

- Nine diesel engine options, including both V-6 and V-8 engines.

- Twenty-nine standard and optional aluminum components, including cab, frame, bumpers and wheels.

- Select from three cab dimensions, steel or aluminum, available in 72 and 80-in. sleeper cabs, 54 and 72-in. non-sleepers. All-welded cab construction—more cab spaciousness—better visibility—hinged dash panels for easy accessibility to wiring.

- Six chassis improvements — including longer, softer springs, improved steering, concealed air cleaner and over-size brake pedals.

See your INTERNATIONAL Dealer or Branch—ask them to give you full details on this newest INTERNATIONAL entry in the 79,000 lb. GCW class. International Harvester Company, Chicago

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The new cross-lug truck tire that costs less...when you buy it...when you run it.

If you use cross-lug tires on your fleet, investigate this new Mighty Mo. Here is a tire as tough and rugged as its namesake. Here is tire power that delivers unsurpassed traction, that will roll up twice the mileage of ordinary tires, that will keep your equipment on the go earning money.

The Mighty Mo is first quality throughout. Its tread is compounded from the newest, finest quality materials, 81% deeper than ordinary truck tires, designed to minimize road scrubbing, for less heel and toe wear. Its Moflex carcass is 100% nylon construction, built to take recap after recap.

Right now, your Mohawk dealer is featuring the Mighty Mo at attractive prices. Ask him to quote on your fleet. You'll not only reduce your cost-per-mile, you'll save on your original purchase. See him today.



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CCJ FLEET MANAGEMENT REPORT—MAY 1961

Costs chew away at common carriers' net

How expenses increased to reduce carrier net in 1960 despite gross revenue boost

	1960		1959		Per Cent Change from 1959	
	Millions of Dollars	Per Cent of Oper. Rev.	Millions of Dollars	Per Cent of Oper. Rev.		Adjusted for change in Volume
EXPENSES						
Equipment Maintenance.....	\$ 594.1	10.2	\$ 589.1	10.5	+3.7	+0.4
Transportation.....	2910.2	50.2	2783.4	49.8	+3.3	0.0
Terminal.....	733.0	12.6	686.0	12.3	+6.4	+3.1
Traffic.....	173.7	3.0	164.3	2.9	+5.7	+2.4
Insurance & Safety.....	244.6	4.2	232.3	4.1	+5.3	+2.0
Administrative & General.....	373.1	6.5	359.6	6.4	+3.8	+0.5
Depreciation ¹	257.8	4.5	232.2	4.1	+11.0	+7.7
Amortization.....	0.3		0.2		+77.1	+73.8
Operating Taxes & Licenses.....	363.9	6.3	323.5	5.8	+12.5	+9.2
Other Net Expense ²	36.6	0.6	32.0	0.6	+13.0	+9.7
Total.....	\$5687.3	99.1	\$5404.4	96.3		
NET INCOME BEFORE TAXES.....	106.3	1.9	207.8	3.7	-47.4	-50.7
OPERATING REVENUE.....	\$5796.6	100.0	\$5612.2	100.0	+3.3	.....
INCOME TAXES.....	\$55.3	1.0	\$86.8	1.5	-36.3	.....
NET INCOME AFTER TAXES.....	\$54.0	0.9	\$121.0	2.2	-55.4	.....

Source: American Trucking Assns., Dept. of Research & Transport Economics, Financial & Operating Statistics Service. Based on reports of 2866 ICC Class I and II carriers. 1—Adjusted. 2—Other income less other deductions. Other income for 1960 was up 9.9 per cent over 1959. Other deductions, largely interest on obligations, were up 12.2 per cent.

Rental census separates vehicles into daily, long-term lease units

Some 2,842 firms leased trucks, truck-trailers, trailers and automobiles in 1958. It was a \$562.7-million business, according to Bureau of Census figures just released.

The statistics give a definitive breakdown between long-term leasing and daily rental. Some 1535 of the firms gave separate figures on their vehicles.

Trucks—Daily rental service accounted for 14,894, while long-term leasing involved 52,635.

Truck-trailers—Daily rental units numbered 1693 and leased vehicles numbered 8065.

Trailers and semi-trailers—Daily rental units totaled 2540. Lease units numbered 11,036.

Passenger cars—In this largest group, autos on daily rental numbered 45,565, while leased cars totaled 122,136.

Mayflower driver cited

Aero Mayflower Transit, Indianapolis, Ind., named contract driver Perry O. Moss as 1960 "Truckman of the Year." He was cited for saving the life of a woman trapped in a burning station wagon last year.

Small fleet loans

Small truck fleets in "distressed" areas can now borrow money at 4 per cent interest. Small Business Administration has cut the rate on its loans in 311 cities. The loans are planned as a recovery measure in areas of high unemployment.

The rate in other cities remains at 5½ per cent. Most SBA loans are made through banks, so any efforts to obtain one should start at your local bank.

Fleets which gross less than \$4-million annually are considered small.

Weekly Truck Tonnage

Week Ending	% Change from Previous Week	% Change from a Year Ago
April 8.....	+ 2.4	- 3.5
April 1.....	+ 0.3	- 6.6
March 25.....	0.0	- 2.8
March 18.....	+ 0.9	- 3.9
March 11.....	- 2.7	- 5.7
March 4.....	+ 6.8	+ 3.6
February 25.....	- 3.1	- 6.5
February 18.....	+ 0.9	- 6.3
February 11.....	- 3.2	- 7.3
February 4.....	+ 3.0	- 8.0
January 28.....	+ 1.3	-11.5
January 21.....	- 3.7	-10.6
January 14.....	+17.5	- 8.2
January 7.....	+13.7	+ 6.2

Based on a weekly survey of 34 metropolitan areas by American Trucking Assns. Dept. of Research and Transport Economics.

Motor carrier expenses during 1960 took 1.8¢ more per revenue dollar than in 1959.

Net result: Only 0.9¢ per revenue dollar was left after taxes as compared to 1959's 2.2¢.

Generally, the pinch came all down the line—as the chart shows. There were no dramatic increases in expenses. Largest were Transportation and Operating Taxes & Licenses.

Transportation expenses took over half the revenue dollar—50.2 per cent and up 0.6¢ as compared to 1959's 49.6 per cent.

Operating Taxes & Licenses nicked each dollar of operating revenue for 6.3¢. This was a half-cent higher than 1959's 5.8¢.

So despite a 3.3 per cent increase in operating revenue, \$5796.6-million in 1960 against \$5612.2-million in 1959, ICC Class I and II motor carriers found their 1960 net after taxes cut more than half—\$54-million in 1960 compared to 1959's \$121-million.

American Trucking Assns. Regular Route Common Carrier Conference, at its recent Board of Governors meeting, took a hard look at the cost problem, came up with these ideas. . . .

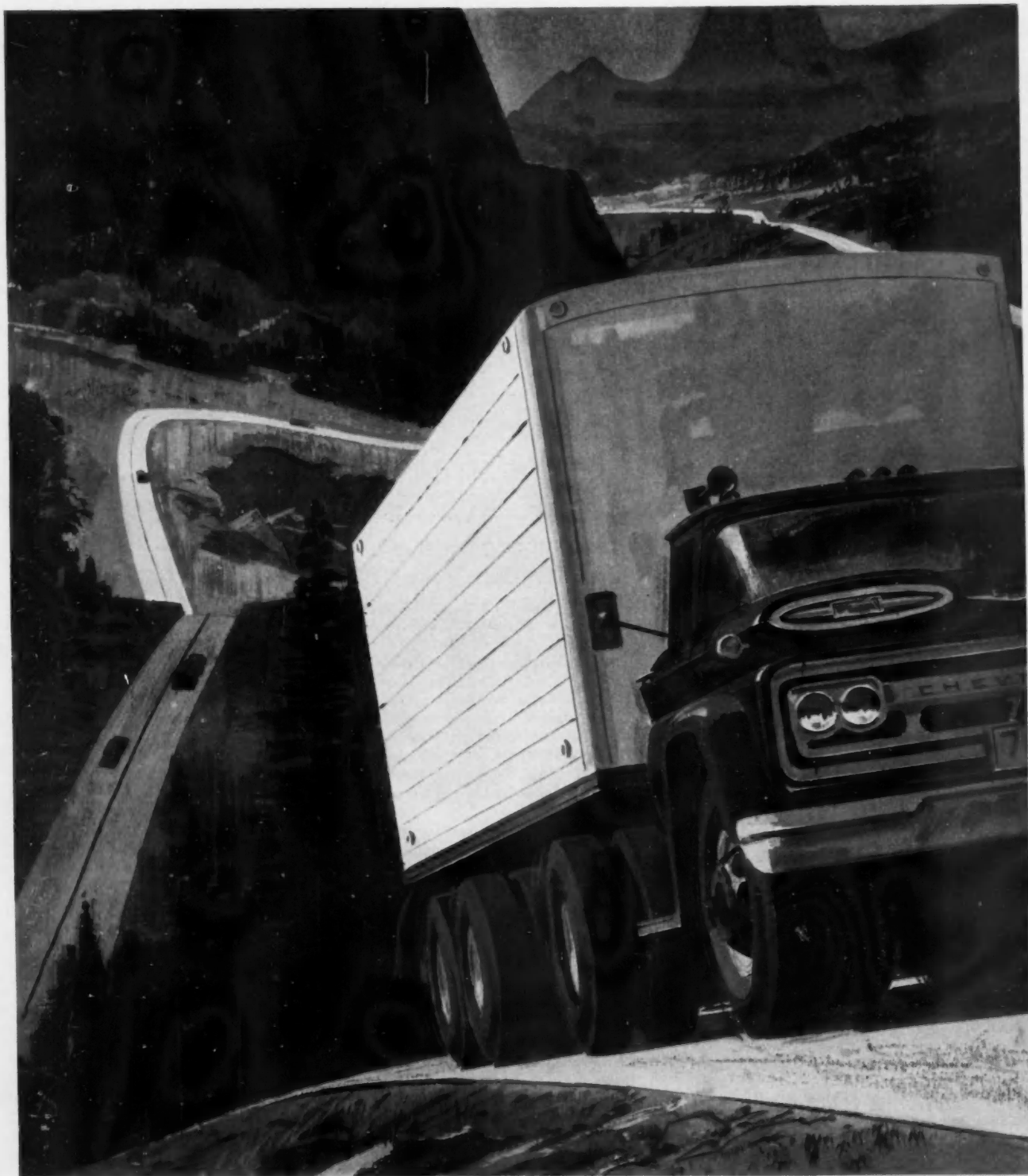
"We figure that 100 pennies make a dollar. And the only way to hold costs in 1961 is to find a lot of saved dollars," said E. L. Murphy, Jr., chairman of the Operations Committee. "In our common carrier business today, we can't afford a single no-pay terminal or call station. This means that sharpening up on operations must become a major source of added revenue," he added.


K. C. Herriott, chairman of the Equipment Committee, said profits are more often based on mills per mile rather than pennies per mile. His solution: ". . . We must have the very best equipment that can be produced and keep it in the best possible working order."

Management, better trained employees—Mr. Murphy said: "Carriers are finding that means of saving pennies by getting more miles to the gallon are diminishing daily. They must look to management for more efficiency."

"More thought is being given to
(TURN TO PAGE 172, PLEASE)

hot tip for sure-firing



AC SPARK PLUG  THE ELECTRONICS DIVISION OF GENERAL MOTORS

RELIABILITY



Reliability built into AC Fire-Ring Spark Plugs is the result of constant improvement brought about by continuous laboratory, production and Proving Grounds tests, plus engineering cooperation with truck manufacturers and truck operators. ACs are designed and built with a keen sense of reality. They must be "right" theoretically, then "right" in application. You'll get greater spark plug reliability with ACs. Install them in your trucks and let AC reliability work for you.

LIGHT-DUTY APPLICATIONS

ACs provide extra reliability with the exclusive Hot Tip that heats faster for self-cleaning action in fouling stop-and-go operation—cools faster to prevent damaging pre-ignition.

HEAVY-DUTY APPLICATIONS

ACs provide extra reliability with internal and external seals that positively prevent gas leakage and heat range change—and with massive special alloy electrodes that resist wear.

IN ALL APPLICATIONS

ACs provide extra reliability because they are engineered to meet every engine's exact power needs and are offered in heat ranges for every type of operation. The industry's most complete line!



FIRE-RING
SPARK PLUGS

▷ ▷ ▷ ▷ ▷ PRODUCER OF POWER FOR THE TRUCKING INDUSTRY

*Patch with scrap?
Not any more...it costs too much!*



SOUTHCO

Alclad Aluminum

Rivetpatch®

cheaper... faster... neater



By the time you round up scrap metal, fasteners and tools, lay out the patch, cut it to size and finish it, you have used up about an hour of shop time. With today's overhead, that's 4 or 5 dollars.

Now... you save up to 68% of this cost by using the all new Southco aluminum Rivetpatch. What's more... you get the neatest, fastest job possible at this low cost. And it's always professional looking, no matter who installs it. Your rigs are back on the road sooner... making money, when you standardize on Rivetpatch for all body patching.

Installation of Rivetpatch takes only a few minutes... simply drill through pilot holes, insert the Southco Drive Rivets, and hit the pins. You work from one side of the job with only a drill and hammer. Nothing else.

Available in four sizes; 3 x 5, 5 x 8, 8 x 11½, and 11½ x 24 inches. Each Rivetpatch pack contains a precision-stamped, aircraft-type patch of Alclad aluminum with pre-punched pilot holes, formed edges and rounded corners. Southco Rivets, sealant and directions are included.

Write to Southco Division, 228 Industrial Highway, Lester, Pa.

SOUTHCO

**FASTENERS IMPROVE TRUCK BODY,
TRAILER AND BUS CONSTRUCTION**

LION

SOLD BY SOUTHCO RIVET DISTRIBUTORS... EVERYWHERE



How does your fleet compare?

American Automobile Assn. recently published its annual study of car service calls. Some of the findings could be significant in helping you find areas in which your fleet does not live up to the norm.

Battery and electrical troubles headed the list of troubles for the fourth year in a row. They accounted for almost a quarter of calls.

Flat tires—long the number one highway nemesis—continued to drop. They accounted for only 18 per cent of service calls, down from over 20 per cent a year earlier.

"Out of gas," incidentally, rose in 1960 to 3.31 per cent of calls, but then lock and key troubles also accounted for 1.43 per cent of AAA service.

Here are AAA's figures:

Type Service	Number	Per cent
1. Battery, electrical	16,085,000	24.76
2. Tire	12,168,000	18.73
3. Ignition	9,108,000	14.02
4. Tow and wrecker	8,114,000	12.49
5. Stuck (mud, snow)	4,327,000	6.66
6. Starter	2,949,000	4.54
7. Out of gas	2,150,000	3.31
8. Carburetor	1,936,000	2.98
9. Gas line	1,351,000	2.08
10. Brakes	1,313,000	2.02
11. Lock and key	929,000	1.43
12. Lights	169,000	.26
13. All others	4,366,000	6.72

Tests of Plymouth unibody

Janeway Engineering Co., Detroit, has told Yellow Cab Co., Philadelphia, it can expect this from its late model Plymouth taxi cabs with unibody construction:

—Up to 250,000 miles of taxi service.

—Up to five years (because of seven-dip anti-corrosion treatment) in a corrosive environment without excessive body maintenance.

—No impairment of structural life of the bodies by installation of Perkins diesel engines.

The independent testing company studied a fleet of 900 taxis, including both unibody and body-frame models. Tests were also conducted with gasoline and diesel engines.

FLEET CAR, 1981?—Ford's experimental "Gyron" draws on some novel theories in future auto engineering. It has only two wheels

Highway chief watches compacts

Rex M. Whitton says the American compacts and foreign imports may affect federal revenues earmarked for the federal highway program. He now estimates that by 1972—target date for completion of the program—federal gasoline revenues will be down by 6 to 8 per cent. The entire loss, he says, will be the result of the economy from smaller cars.

MAINTENANCE

Fleet car factory capsules . . .

Tempest—Horn blow when you turn the wheel? Check the steering wheel hub to see that it is free from small metal chips or other foreign matter. They can short the Belleville spring to ground when the wheel is turned.

1961 Studebaker-Packard—Warmup in 6-cyl OHV engines can be improved with the installation of manifold retaining washers (P/N 41x243) between each of the six manifold retaining clamps and nuts.

Chrysler cars—When you reassemble one of Chrysler Corp.'s alternators, remember: The nylon washer must be placed only between the lock washer and the field terminal. Otherwise, look out for blown fuses or voltage regulator damage.

1960 Ford—Here are revised front end alignment specifications: Caster: $+\frac{3}{4}$ deg to $+1\frac{1}{4}$ deg (formerly $-\frac{1}{2}$ deg to $+\frac{1}{2}$ deg). Camber: $+\frac{1}{2}$ deg to $+1$ deg (formerly $+\frac{1}{2}$ deg to $+1\frac{1}{2}$ deg). Toe-in: $\frac{1}{8}$ to $\frac{1}{4}$ in. (formerly $\frac{1}{8}$ to $\frac{5}{32}$ in.).

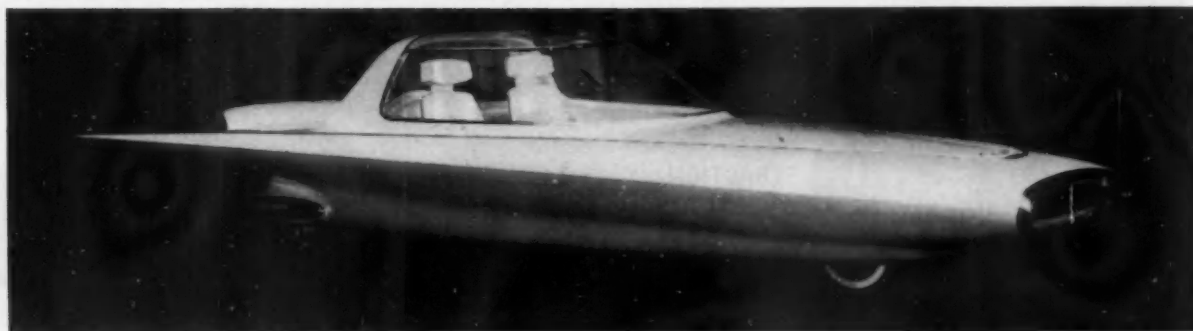
Tempest—When the oil pressure indicator light flicks on while a Tempest idles, the trouble is probably in the oil pump. Dirt or chips have probably settled on the oil pressure regulator ball seat. Pontiac says cleaning the pump is all that is necessary.

1960 Falcon—Revised fuel pump specifications: Minimum booster pump vacuum is now 10 in. of mercury at 600 rpm. Fuel pump pressure— $3\frac{1}{2}$ - $5\frac{1}{2}$ psi at 500 rpm. Volume—one pt in 30 sec at 500 rpm. Fuel pump vacuum—6 in. at 600 rpm. Booster pump vacuum—10 in. at 600 rpm.

Olds F-85—Propeller shaft slip yoke and U-joints generally, need no lubrication under normal conditions. However, if the car gets abnormal use, rely on the original recommendation for lubricating the slip yoke at 8000 miles.

(TURN TO PAGE 166, PLEASE)

(it's stabilized by a gyroscope), two outrigger wheels for parking and two lounge seats. Another far-off possibility: Fuel cell power.





Double your —drive tire costs down—with the

PROVED:

Wider, flatter tread puts more rubber on the road for smooth, even rolling — longer wear.

PROVED:

Thicker tread (up to 60% deeper than conventional tires) is compounded with super-toughening agents for longest-lived, slowest-wearing rubber produced today.

PROVED:

Wide, scientifically placed grooves vent heat, provide cooler running temperatures, help keep heat build-up to safe minimum.

PROVED:

Hundreds of deep-cut gripping edges guard against slips or spins, provide safer, surer traction at all times.

PROVED:

3-T Process Nylon Cord body fights heat, shock and fatigue — can be recapped again and again.



No newcomer to America's highways is the Hi-Miler Cross-Rib by Goodyear. This is the thoroughly proved veteran of a conservatively estimated billion miles of hauling on all kinds of roads, under all kinds of conditions.

RESULT: Actual report after actual report of the Cross-Rib drastically reducing tire costs by delivering double the drive-wheel mileage—and more—of any conventional truck tire.

This is fact, not clouded claim. This is proved performance, not projected promise. This is what the Cross-Rib can do—and does.

Put yourself miles ahead by buying or specifying the Cross-Rib tire or any of the top-performing Goodyear truck tires. See your Goodyear Dealer or write: Goodyear, Truck Tire Dept., Akron 16, Ohio. Lots of good things come from Goodyear.

M.E.S. CAN SPELL BIG SAVINGS FOR YOU!

The new Goodyear Mileage Engineering Service costs you nothing in fees, extra equipment or man-hours, yet can provide new lows in tire cost-per-mile and capital investment. Basically, M.E.S. is a new plan of tire rotation that lets you get maximum benefit out of Cross-Ribs and other long-wearing Goodyear tires and keeps your trailer tire needs in balance. To put M.E.S. to work for you, just write Goodyear, Truck Tire Dept., Akron 16, Ohio.

TOP TEAM FOR BIG TRUCKS

**HI-MILER
CROSS-RIB**
for drive wheels



**TRACTION
HI-MILER**
for front wheels

GOOD

drive-wheel mileage billion-mile-proved CROSS-RIB



NOT JUST ANOTHER CLAIM, BUT ANOTHER ACTUAL PROOF:

"Drive-wheel Mileage More Than Doubled with Cross-Ribs"

—reports G. E. Paschall of East Texas Motor Freight

"We've been using Cross-Ribs for three years now," continues Mr. Paschall. "And they've been rolling up an average of more than 117,000 miles before being switched to trailer wheels for many more miles of run-out. That's really better than double the average of only 56,000 miles from

previously used standard tread tires, before recap or run-out.

"Naturally, we're interested in tire economy, but safety and on-time arrivals take priority. And that's where the traction and dependability of Cross-Ribs play a big part."



**MORE TONS ARE HAULED ON GOODYEAR
TRUCK TIRES THAN ON ANY OTHER KIND**

Hi-Miler—T.M. The Goodyear Tire & Rubber Company, Akron, Ohio

ENGINEER'S FIELD REPORT



Truck fleet lengthens engine life 50% saves \$2500 per year using RPM DELO Oil

The big tractor-trailer rigs of United Retail Merchants, Spokane, Washington, average 50 to 60 thousand miles a year on runs through Montana, Idaho, and Washington. Yet, during the past three years engine life has increased by 50%... thanks to RPM DELO Oil.

"Many of our International tractors have well over 150,000 miles of heavy duty service with only minor repairs needed," reports Ted Michelson, U.R.M. Shop Foreman. "This kind of performance

is saving real money in our shop... I'd estimate RPM DELO saves us a conservative \$2500 a year.

"We used to have a lot of trouble with carbon deposits in our engines. At overhaul periods, pistons were frequently choked with carbon and the rings were stuck tight. But after we switched to RPM DELO Oil we eliminated this problem, got cleaner engines and longer engine life."

RPM DELO Oils reduce wear and prolong engine life because they cling to parts whether the engine is running or idle... hot or cold. Anti-oxidant fights gum and lacquer formation, special detergent keeps parts clean. Other additives prevent corrosion of bearing metal and crankcase foaming.

Why not try RPM DELO Oils? Let them cut your costs, lengthen equipment life. Just call your local representative, or write any company listed below:



STANDARD OIL COMPANY OF CALIFORNIA, San Francisco 20 • STANDARD OIL COMPANY OF TEXAS, El Paso
CALIFORNIA OIL COMPANY, Perth Amboy, New Jersey - Denver, Colorado

TRADEMARK "RPM DELO" AND CHEVRON DESIGN REG. U.S. PAT. OFF.

CCJ FLEET MANAGEMENT REPORT—MAY 1961

Mobile radios for Buffalo buses

Niagara Frontier Transit System, Buffalo, N. Y., has contracted for installation of 584 mobile units for its buses and other vehicles.

General Electric, the supplier, says it is one of the largest two-way radio contracts ever signed by a private business.

The bus firm will have five remote control desk-type units for dispatchers and five 250/330-watt base stations.

Niagara Frontier has used two-way radios on a limited basis for seven years. At present they are installed in vehicles for supervisors, road service mechanics and operating executives.

Passenger annoyance? The system cuts it to a minimum with a special speaker system. One loud speaker is placed near the driver. But when he picks up his handset, all other speakers in the division are disconnected.

Future project: Special service announcements to passengers through a public address system.

Justice Dept. studies tire rentals

Antitrust Division of the U. S. Justice Dept. is studying mileage tires rental by tire manufacturers to city transit companies.

A representative of the division has reviewed several

American Transit Assn. files, particularly those on the ATA Purchasing and Stores Division study of tires. The representative has also visited at least one transit company.

ATA, in notifying its members of the study, says it has no information on its origin.

Federal aid for transit systems?

Officials of major cities are putting pressure on the White House and Congress for federal aid in solving urban mass transportation problems.

President Kennedy, also, has called for federal action. In a special message to congress recently he said:

"Nothing is more dramatically apparent than the inadequacy of transportation in our larger urban areas. The solution cannot be found only in the construction of additional urban highways—vital as that job is. . . . Planning for transportation and land use must go hand in hand . . ."

One result: A group of top Administration officials has already met to discuss possibilities. The Dept. of Commerce and the Housing and Home Finance Agency have given the responsibility of studying the problem—and what the federal government can do—to a "special policy planning task force."

(TURN TO PAGE 166, PLEASE)

Lifts All CARS and FLATBED TRUCKS



**ONLY TWO
STAGE LIFT**

1st Stage - 43"

2nd Stage - 62"

- ★ Will not damage soft bumpers
Picks up by bumper brackets.
- ★ Never becomes obsolete —
Inexpensive adapters available.
- ★ 5,000 Lb. Capacity
- ★ New long-lasting Hycar Cup in cylinder.

Each SAV-T-Jack has an instruction chart on "How to lift 1961 Cars."

7-Ton SAV-T-HOIST also available

Write for complete information:

SAV-T-ENGINEERING CO. • 316 E. Beach Ave., Inglewood, Calif.

More details? Circle 114 on reply card inside back cover
COMMERCIAL CAR JOURNAL, May, 1961



Model P600

Factory-Recommended Tools Speed Diesel Nozzle Cleaning

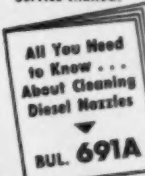
Each tool has been specifically designed for a particular cleaning operation which cannot be done properly with ordinary tools. Besides insuring safe and efficient cleaning of injector units these tools save time which means service costs

are lower, profits are up. Available individually or in kits containing the tools recommended for particular types or related lines of injection units. Complete instructions furnished with each kit.



**177 DIFFERENT TOOLS
46 POPULAR KIT ASSORTMENTS**

Mail Coupon For
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Service Manual



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200 N. Braddock Ave., Pittsburgh 8, Pa.

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☐ Send Tool Kit Bul. 903D applying to _____ Nozzles

MAKE

NAME _____

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CITY _____

STATE _____

CK-20A

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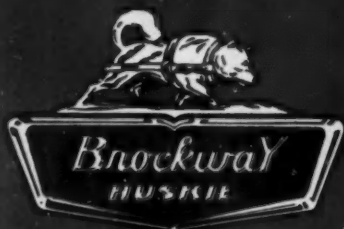
Now!

...the
158 SERIES
rounds out a
complete

New Line



TRACTORS...
from 45,000 to 60,000 lbs. GCW.



★ COMPACT DESIGN — 90" BBC

- Wider choice of power: Gasoline, up to 200 hp; Diesel, up to 160 hp.
- New stronger frame with minimum weight.
- Wide track front axle.
- New cab; fiber glass engine housing.
- Enlarged frontal area and cooling system.
- Set-Aside fenders for easy maintenance.
- New improved front suspension and steering linkage.

CARGO ...
from 23,000 to 36,000 lbs. GVW.



Compact and Power-packed **BROCKWAY**

HUSKIES ... *medium-size ... economy-wise*

More models to match more jobs! With addition of the brand-new 158 Series, Brockway now offers a complete line of intermediate-size Huskies ... ideal all-purpose trucks that maneuver easily in short-haul service, yet have the power range for fast, profitable, over-the-road transport, too.

These compact Huskies are low in operating cost and long on service, with many money-saving, mile-making features. They include exclusive Uni-Matched design which means that all components of Brockway trucks — power train, chassis, cab and hundreds of functioning parts — are fully coordinated in one smoothly operating unit.

This means job-matched performance and maximum economy and efficiency. Solid reasons for seeing your Brockway representative for complete details on the new line of medium-size Huskies.

BROCKWAY MOTOR TRUCKS, CORTLAND, N.Y.
Division of Mack Trucks, Inc.

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TANDEM AXLE ...
from 40,000 to 50,000 lbs. GVW.



BENDIX HYDROVAC[®] POWER BRAKES

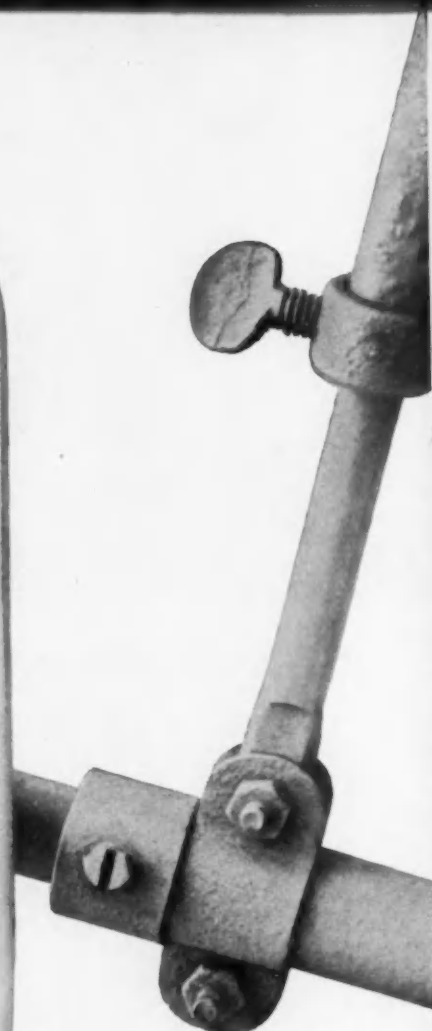
Lead the field
in three
important areas:

1. BIGGER PAYLOAD—Because Bendix Hydrovac Power Brakes weigh less, they permit hauling increased payloads—up to several hundred pounds *extra*. **2. LOWER PRICE**—Bendix Hydrovac Power Brakes cost *less to buy—also less to operate, less to maintain*. **3. BETTER PROTECTION**—Bendix Hydrovac Power Brakes have built-in standby safety; manual braking in case of power failure.

MORE BENDIX HYDROVAC VACUUM POWER BRAKES ARE IN USE THAN ALL OTHER MAKES

Bendix PRODUCTS
DIVISION South Bend, IND.

More details? Circle 117 on reply card inside back cover



Metal brake lining on LA market

S. K. Wellman Co., Bedford, Ohio, is conducting sales tests, in Los Angeles, of powdered metal brake linings for passenger cars.

Called "Velvetouch Metallic" linings, they have undergone 43-million test miles during the past two years. Wellman already has similar truck brake linings on the market.

Company claims: They eliminate heat, water and high-speed fade; require less pedal pressure; stop quicker; last longer; eliminate brake squeaking; and reduce number of necessary adjustments. All linings are bonded to new brake shoes.

Auto makers, ATA endorse brake fluid standards legislation

American Trucking Assns. and the Automobile Manufacturers Assn. have endorsed, in principal, proposed federal legislation curbing the sale of substandard, unsafe brake fluids.

In testimony before the House Subcommittee on Health and Safety, the auto makers suggested changes in the proposed bill which would require labeling of fluids to show they meet SAE standards. They also recommended a technical advisory committee be set up to help develop a list of good safety equipment for incorporation on federal vehicles.

They opposed a bill to impose federal standards on safety features of motor vehicles sold, shipped or used in interstate commerce. They labeled it "unnecessary and impractical."

Lewis C. Kibbee, director of ATA's Engineering Dept., also told the subcommittee that federal standards should be in terms of the SAE standards. He further suggested wording which would make it a crime to transport substandard brake fluid only if the motor carrier does it knowingly and willfully.

Fruehauf Twin 20's go to sea

Fruehauf Trailer Co.'s Twin 20 container vans have put to sea. They now sail aboard American President Lines ships from the West Coast.

Plans between APL and Fruehauf call for additional Twin 20's until \$1.25-million worth are sailing back and forth to the Orient.

The Fruehauf container system was shown at the Southern Pacific

Nylon cord makers claim half of 1960 passenger car replacement tire sales

Trailer Flat Car Yards in Los Angeles recently. The demonstration included full operation of the container-trailers and the way they will be stacked up to six-high in the ship's holds.

The Twin 20's are unique in that two of the containers are clamped together to form a single 40-ft trailer. Any two containers are locked in tandem with four coupling clamps. The front unit's bogie is slipped to the rear of the second to form a tandem. And with the addition of a fifth wheel unit—it's ready to roll. (See November 1960, page 319.)

Fruehauf has added 100 workers at its Ontario, Calif., plant to maintain production on the APL order.

APL, in turn, has outfitted two new Sea Racer Cargoliners at a cost of \$32-million for the new service. They will carry containers in their holds and on the decks. Two other ships were recently converted for container service. Containers are taken on board with a large crane and lowered through the hatch into the ship's hold. The Twin 20's have been designed to lock together end-to-end, side-to-side, and top-to-bottom in the hold. They are also engineered for stacking six-deep and to hold up under rolling or tipping on board.

Twelve seek exhaust purifier OK

California's Motor Vehicle Pollution Control Board has received applications from 12 manufacturers who claim their devices can control air contamination from vehicle exhaust systems.

But first the board must set up evaluation criteria for the devices, as well as testing procedures and a public information program. Work is already underway on those preliminary projects.

Parts Rebuilders Move

Automotive Parts Rebuilders Assn. has moved its headquarters to the NADA Building, 2000 K St., N.W., Washington 6, D. C.

Du Pont and Chemstrand have announced simultaneously—but separately—1961 figures on the continuing struggle for the tire market by Tyrex and nylon.

Their figures show passenger car replacement tires using nylon jumped 12 per cent—from 38 per cent of the market in 1959 to 50 per cent in 1960. Chemstrand further states rayon cord used last year dropped by 57 million pounds.

Replacement truck tire use of nylon cord also was up, says Du Pont. The rise was from 47 per cent of the market in 1959 to 55 per cent in 1960.

On another front, U. S. Rubber is increasing its nylon manufacturing facilities in Winnsboro, S. C. Reason: To take care of "a growing demand for nylon tire fabric." It's the second \$-million-plus expansion in three years.

Industrial Rayon Corp., meanwhile, reports a resurgence of business—enough to cut its 1960 losses and bring a \$327,657 net income in the first quarter of this year. Increase in production in the new, improved Tyrex is going along on schedule, the company says.

Ford buys two Autolite plants

Ford Motor Co. has purchased two parts manufacturing plants and some other assets of The Electric Autolite Co.

Ford takes over production at a battery plant in Owosso, Mich., and a spark plug plant at Fostoria, Ohio.

The \$28-million cash deal leaves both companies using the "Autolite" trade name and the same sales organization. Electric Autolite continues to make spark plugs at one factory (with another in the planning stages) and batteries in five cities.

Bare hands, live wires

Holan Corp. is taking a specially-equipped truck on a coast-to-coast tour to show electric companies its method of working barehanded on live high-voltage power lines (Dec. 1960, page 120).

Holan manufactures the equipment (TURN TO PAGE 170, PLEASE)

HERE'S A BETTER

*The most
COMPACT
valve on the
market*

Part No. AF37415.
Field Replacement
Model AF37411
also available.

*The
LIGHTEST...
with all these
features*

*Fully **INTER-
CHANGEABLE**
with other
valves*

***CARTRIDGE
TYPE UNITS**
for easy
servicing*

A FEW OF THE MANY ADVANTAGES:



1. EASY TO SERVICE. When service is required, parts are accessible without removing valve from vehicle. Cartridge type replacement units make service quick and easy.



2. SMALLEST IN SIZE. Judge for yourself how this compact design saves on mounting space. The Type EE measures less than 5½ inches in its greatest dimension.

WK61-1

TRAILER BREAKAWAY VALVE

THE NEW

Wagner® Lockheed®

RELAY-EMERGENCY TYPE EE

This completely new design in an Emergency, Relay, Quick-Release Valve incorporates the many engineering features pioneered by Wagner and adopted by most manufacturers. It gives you all the proven advantages of Wagner-originated sensitive relay action, charging protection, "back-flow" prevention, and modulated emergency action... PLUS the additional advantages of high flow capacity, compactness, light weight, and dollar economy. The New Type EE Valve:

Minimizes Brake Response Time. Application and release times are shorter because of high flow and volume capacity permitted by increased flow areas, interior streamlining, and efficient "quick-release" action.

Prevents Premature Trailer Movement. Initial charging protection prevents vehicle movement until safe operating pressure is reached in the trailer system.

Eliminates Unnecessary "Dynamiting". Wagner's modulated, or "metered," emergency action applies the brakes in proportion to the loss of pressure in the system.

Gives Instantaneous Emergency Action. You get full immediate trailer brake application in event of complete breakaway or severance of emergency line.

Gives Positive Pressure Protection. Wagner's positive-sealing check valve protects trailer reservoir pressure when air supply gets too low for safety.

Is Fully Corrosion-Resistant. Aluminum body construction and the use of corrosion-resistant materials and plating throughout the valve add years of service.

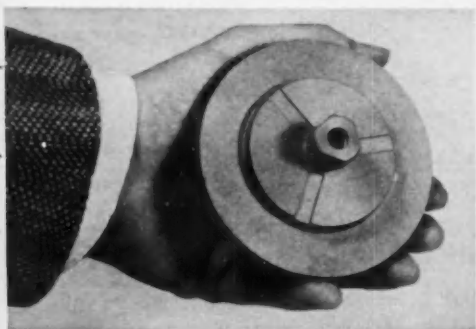
Meets All I.C.C. Regulations.

CONSULT YOUR WAGNER® AIR BRAKE SPECIALIST. He will give you profitable information about this new and better valve. Or write for Bulletin KU-329.

REMEMBER—when ordering new equipment, be sure to specify Wagner® Lockheed® Air Brakes—Wagner builds *all* components from actuating system to foundation brakes.

Wagner Electric Corporation

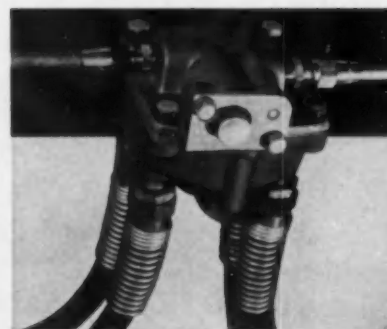
6470 PLYMOUTH AVENUE, ST. LOUIS 22, MISSOURI



3. EXTRA LARGE RELAY PISTON. A full 4-inch piston provides balanced input and output pressure between tractor and trailer brakes for smoother stops.



4. PORTS DESIGNED FOR CONVENIENCE. Exceptionally clear porting identification reduces the possibility of incorrect installation. Exhaust port is shielded to prevent the entrance of dirt, water and other road material.



5. QUICK, ECONOMICAL INSTALLATION. Porting arrangement is designed to eliminate the need for expensive elbow fittings. Lighter weight permits the valve to be safely nipple mounted on the air tank.

New lightest-weight **SHULER AXLE** creating great interest

**Prompt shipments
now being made**

IN February, Shuler announced a completely new light-weight trailer axle—product of five years' research and the development of a tough and rugged new steel.

A major breakthrough in engineering design, the new Shuler axle weighs 50 pounds less than the 20,000-pound-capacity Shuler

tubular axle it replaces. Strength is equal.

Inquiries and orders for sample 20-L axles have been pouring in at a record rate, and shipments are now being made. If you have not yet sent for full details, we urge you to investigate this major new achievement. Address:

SHULER AXLE COMPANY

Incorporated

2900 Second Street, LOUISVILLE 8, KENTUCKY



Subsidiary of Eaton Manufacturing Company

SALES OFFICES: CHICAGO, DETROIT, PHILADELPHIA, OAKLAND AND TULSA • WEST COAST WAREHOUSE, OAKLAND, CALIFORNIA



Utah is ready to increase limits

Utah is ready for weight and size increases, if Congress accepts the recommendations of the Bureau of Public Roads or American Assn. of State Highway Officials.

The Utah legislature has passed a measure to take advantage of any increases. The State Road Commission is instructed to "adopt size and/or weight provisions . . . reasonably comparable. . ."

The measure also fixes gross weights according to a table. Maximums on any group of axles will vary with the distance between the first and rear axle of the group. It ranges from 33,000 lb on a four-ft distance to 79,900 lb for 54 ft and over.

N. J. studies auto speed governors

The possibility of state legislation requiring speed governors on passenger cars has been raised in New Jersey. The state legislature recently created a commission to study their practicability.

Maybe you can save on taxes

If your state laws permit, maybe your fleet can do what one large public utilities company has done recently to save on taxes.

The firm is making sure it gets full credit for gasoline used in off-highway operations. The gimmick: They've bought 60 Servis Fuelometers (Service Recorder Co., Cleveland, Ohio) which lets them gage, exactly, the fuel going into the engine after the equipment leaves the highway.

After that, it's a simple matter of subtraction to deduct tax-free fuel.

ICC rules on 'Sealdtank' rights

Interstate Commerce Commission has cleared up the question, "Who may haul liquids in Sealdtanks?"

Their answer: General commodities carriers may use dismounted collapsible and stackable containers—whether they are supplied by the carrier or the shipper. They are not authorized to use pre-mounted "Sealdtanks," however.

Tank truck operators, on the other

House group rewrites truck tax package

Fleetmen who had personally joined the fight against the President's highway tax bill learned last month they had scored a small victory.

The House Ways and Means Committee reported the bill out of committee—rewritten.

Now it looks as though neither side will be particularly pleased with it. But it is a lot more savory to truck and bus fleets than the original Kennedy proposal.

Its changes could well cause some heightened efforts from both fleetmen and the Administration.

It's still bad for fleets because it would, nevertheless, greatly boost their taxes.

The Administration will not endorse it because it will require replacement of highway user taxes which had been diverted to the general fund in past years.

Among the revisions the committee made:

- Continue the present 4¢ per gal tax on both gasoline and diesel fuel. The President wants 7¢ per gal on diesel fuel.

- Increase highway use tax on trucks and buses weighing over 26,000 lb from present \$1.50 per 1000 lb to \$3. Kennedy had asked for \$5.

hand, are authorized to use them when the containers are pre-mounted. Again, it makes no difference whether the containers are supplied by carrier or shipper.

ICC declined to set a "quantity test" on container size.

The ruling is applicable to general commodities carriers with exception in their authority directed against both the transportation of "commodities in bulk" and "those requiring special equipment."

Will you be ready?

Comprehensive changes in Interstate Commerce Commission lighting regs go into effect July 1. For details on these changes, see Apr. '61, page 204, Nov. '60, page 362 and Mar. '60, page 105.

- Hike tread rubber taxes from present 3¢ per lb to 5¢. The President wants 10¢.

- Boost tax on tires and inner tubes from present 8¢ per lb to 10¢. It follows the Administration proposal.

Present Kennedy had proposed the new taxes to supply an estimated \$900-million needed to complete the federal highway program on schedule by 1972.

The committee's solution to smaller taxes: Stop diverting half of the 10 per cent excise tax on trucks and buses to the general fund. Instead, pour the entire amount into the highway trust fund. That one item in the committee's bill would add \$1.7-billion to the fund over the next 11 years.

Administration officials, meanwhile, haven't let up their pressure on Congress to get the President's way.

Only thing sure: The Administration is determined to get more highway money from somewhere.

The President prefers the higher truck and equipment levies. His strongest objections to the committee's bill will be taking money from the general fund. That would require substitute taxes from another area to make up the difference.

Look for more Kennedy influence

A tug-of-war for power over the ICC and other regulatory agencies is now going on in Washington.

On one end of the rope is President Kennedy. On the other end is Congress.

The President is not faltering in his goal to tie the various regulatory agencies closer to the White House. Neither has he given up on creating a single government transportation regulatory agency.

In a special message to Congress, dealing with the agencies, he served notice he would send special recommendations on transportation. At the same time he called for greater coordination among various agencies. However, he put special emphasis on the transportation agencies.

President Kennedy also wants more
(TURN TO PAGE 182, PLEASE)

NOW

the most
talked-about
truck in the
industry
offers
new

**“STOP
and GO”
DIESEL
ECONOMY**



It's the **WHITE COMPACT** **WITH CUMMINS DIESEL POWER!**

In just six operational months, the new **WHITE COMPACT** has set sensational new standards of economy for heavy-duty urban and suburban hauling.

Now the **COMPACT** delivers *further* cost reductions with the option of new Cummins "stop-and-go" diesel power for city pickup and delivery. For many truck operators this new kind of dieselization will mean important savings in fuel, main-


tenance, and equipment availability.

And with a choice of two diesel horsepower—130 or 160 H.P.—added to the range of Super Mustang gasoline engines, the economies possible with the **WHITE COMPACT** become even greater for *all* operators!

Truck or tractor, the new **WHITE COMPACTS** do more work in less time at lower cost. Get a demonstration today.

THE WHITE MOTOR COMPANY • CLEVELAND 1, OHIO

Branches, distributors, and dealers in all principal cities

WORLD  LEADER IN HEAVY DUTY TRUCKS

WHITE TRUCKS

More details? Circle 120 on reply card inside back cover



Syd Kramer (right) Supt. of Maintenance for Emery Transportation, Chicago, checks the 79% greater tread depth of a new Cooper Road-Grip with Pat Maloney, Cooper Western Division Manager.

Emery reports up to double the mileage with new Cooper Road-Grip Super Treads

Emery Transportation is one of America's giant trucking firms. A fleet of 900 tractors and 1200 trailers puts thousands of Cooper truck tires on the road every day. More than 40 million miles are logged every year hauling food, meat and roofing materials interstate.

Many Emery tractors are already equipped with new Cooper Road-Grip Super Treads on rear duals. Cooper Road-Master Extra Mile tires are used on front and trailer wheels. Syd Kramer, Supt. of Maintenance, reports that Cooper Road-Grip Super Treads deliver up to double the original mileage, as compared to conventional tires. They also give more lateral traction to protect against side-slips and jackknifing, plus

more power traction to keep heavy loads moving on slick roads, steep grades, and hills

79% More Tread Depth

This phenomenal mileage and extra safety result from the Cooper Road-Grip's special design and 79% deeper tread. The tread is over $\frac{3}{4}$ " deep in popular fleet sizes. Cooper Shock-Guard construction and super-processed "Hi-T" DuPont nylon cord give even more money-saving mileage by delivering as many as 4 and 5 bonus recaps.

Save Money

Emery Transportation is only one of hundreds of truck operators who have increased mileage and cut costs by chang-

ing to Cooper tires. See your Cooper truck tire dealer for complete details and special prices. Or write Dept. 118 today. Cooper Tire & Rubber Company, Findlay, Ohio.



Syd Kramer marks Cooper Tire No. 10717 as it goes into operation on an Emery tractor unit.



... miles ahead

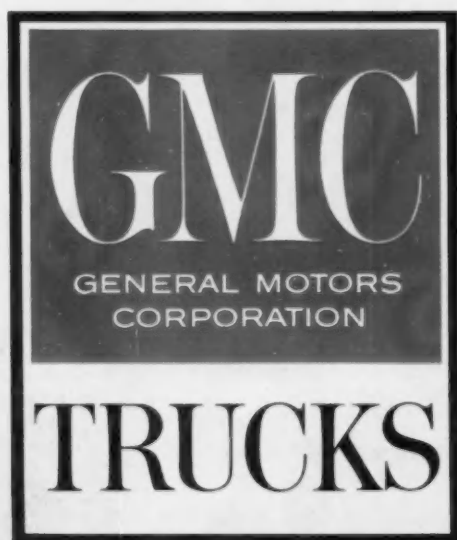
Cooper Tires

TEAR OUT AND SAVE

POWER REASONS

WHY GMCs ARE THE MOST ADVANCED TRUCKS IN 20 YEARS!

FROM ½-TON TO 60-TON
GENERAL MOTORS LEADS THE WAY!



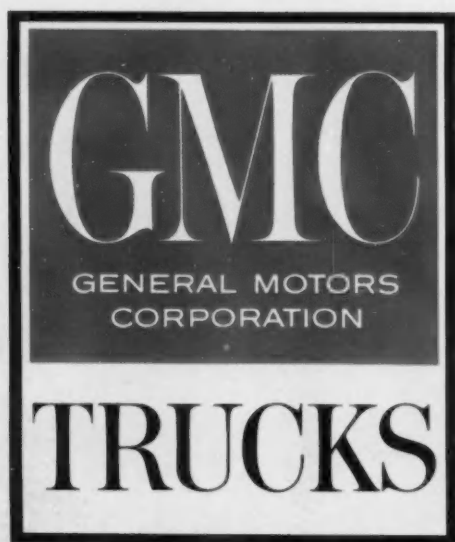
**ANOTHER
TRUCK TRIUMPH
OF THE 60's!**



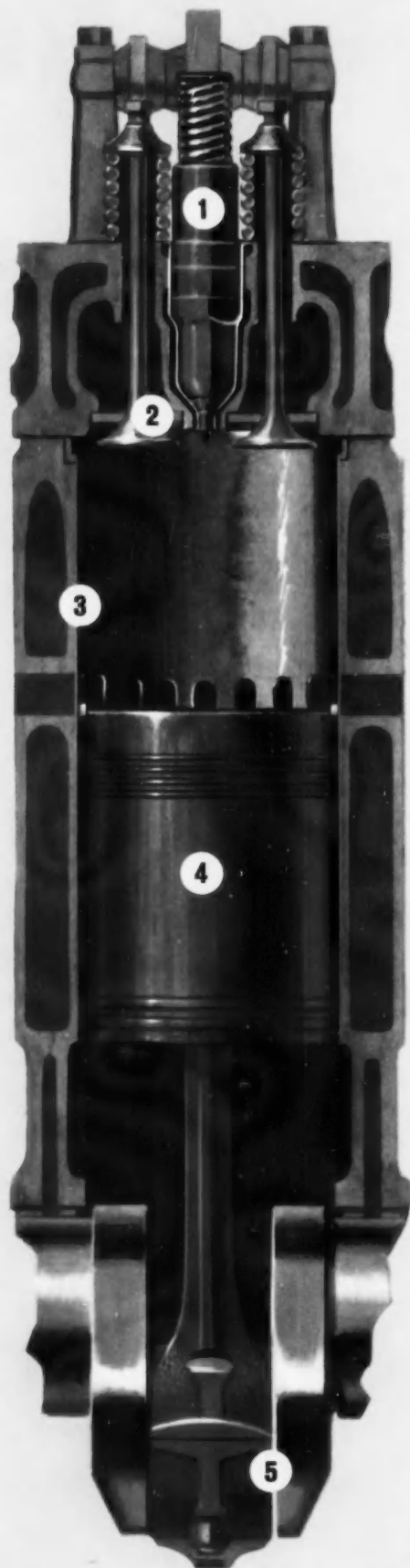
PULL HERE

POWER REASONS WHY GMCs ARE THE MOST ADVANCED TRUCKS IN 20 YEARS!

FROM 1/2-TON TO 60-TON
GENERAL MOTORS LEADS THE WAY!



ANOTHER
TRUCK TRIUMPH
OF THE 60's!



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SHORTEST, LIGHTEST AND LEAST EXPENSIVE

GMC DIE

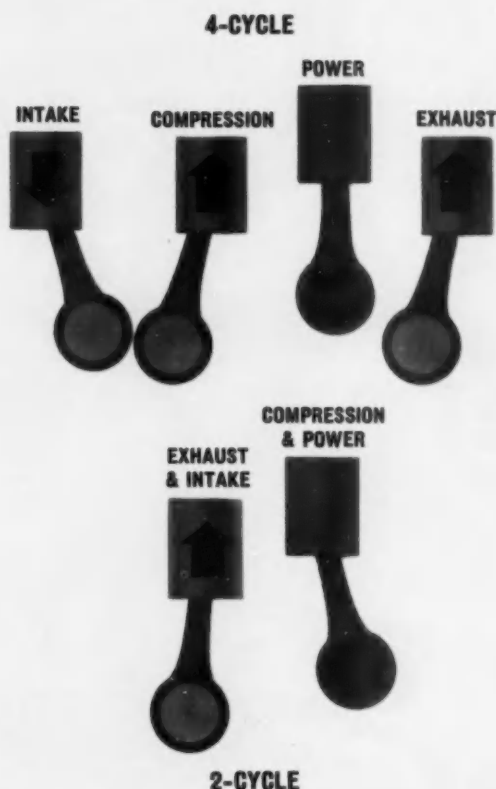
1 Simplest, most-durable fuel system of all. Each GMC Injector measures the exact amount of fuel needed for speed and load; builds up high pressure; atomizes the injected fuel for fast, smooth and complete burning...all in a single operation. There is no need for complicated pumps and troublesome high-pressure lines.

2 Better breathing and more complete venting of exhaust gases with four exhaust valves (not just 1 or 2). You get cooler operation for longer valve and engine life...more power from the same amount of fuel.

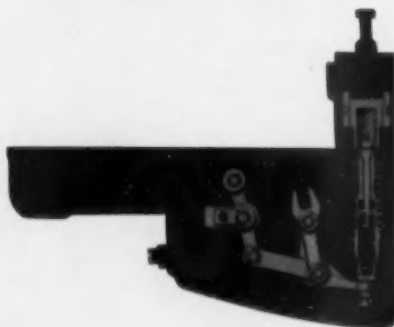
3 Leak-proof, dry-type cylinder liners maintain even temperature from top to bottom for minimum distortion. Servicing is made faster and easier.

4 Long-life, malleable iron pistons are built to withstand even excessive heat and pressure. "Fire ring" design helps keep uniform temperature in the combustion chamber for improved efficiency on less fuel, particularly under heavy load.

5 Bearings outlast others. All connecting rod and main bearings are Moraine M400. Tocco-hardened crankshaft has large journal overlap and rolled fillets to resist damaging bending fatigue.



Get 100% more power strokes per crankshaft revolution. With GMC's 2-cycle design, every time the piston goes down, power goes to work. There are no wasted strokes and idle lags. You get higher torque output at all engine speeds... get your loads moving faster and smoother.



Exclusive economy range governor. Only GMC Truck diesel engines have this economy range governor that positively and accurately regulates engine cruising speeds at the most efficient rpm for top fuel economy and longer engine life. Standard equipment on V-6 4-wheel models.

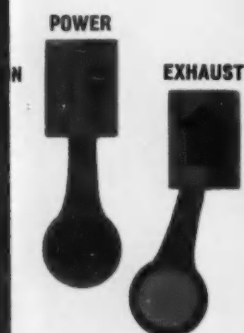
You get rugged, competition... many inches of space inside cab room, simple and full advantage of dimensions—lightest weight, 530 pounds less, to carry loads—two-cycle design for acceleration, smoother operation, fuel economy and



LEAST EXPENSIVE TO OWN—IN THEIR CLASS

GMC DIESELS

CLE

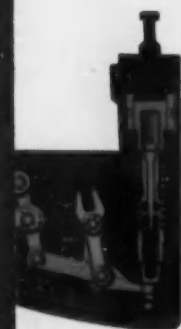


COMPRESSION
& POWER



CLE

es per crankshaft revo-
cle design, every time
wer goes to work. There
and idle lags. You get
ll engine speeds... get
and smoother.



ernor. Only GMC Truck
conomy range governor
ately regulates engine
ost efficient rpm for top
r engine life. Standard
el models.

You get rugged, compact construction... many inches shorter for more inside cab room, simpler servicing and full advantage of short BBC dimensions—lightest weight, up to 530 pounds less, to carry bonus payloads—two-cycle design for faster acceleration, smoother power, exceptional fuel economy and added life.

BIG PULLING POWER! HIGH, FUEL-SAVING PERFORMANCE!

MODEL	MAX. TORQUE	MAX. HP
6V-71	604 @ 1200	197 @ 1800 218 @ 2000
8V-71	758 @ 1200 or 805 @ 1200	243 @ 1800 290 @ 2000

Ratings are at sea level and 60° F.



CLASS!

PERFORMANCE!

X. HORSEPOWER

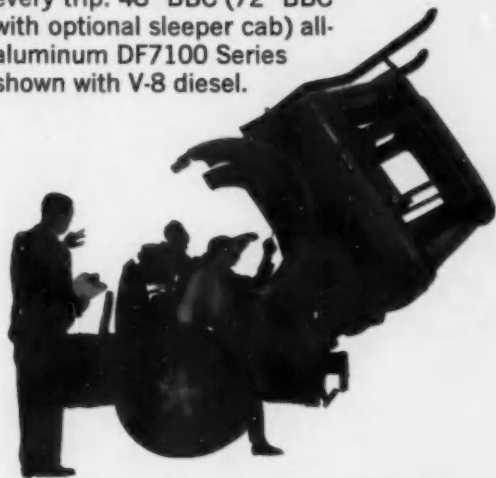
197 @ 1800
or
218 @ 2100

243 @ 1800
or
290 @ 2100

F.



Shortest, lightest tractors in their class! Earn up to \$2,000 extra every year because you haul up to 2,000 lbs. extra every trip. 48" BBC (72" BBC with optional sleeper cab) all-aluminum DF7100 Series shown with V-8 diesel.



Save service time and expense with 55° tilt. Diesel is easy to work on. Stationary island holds controls in trouble-free alignment. With 72" BBC and front axle set back 52", you haul bonus payloads . . . turn shorter, maneuver easier everywhere.



Yours only from GMC—V-6 diesel-powered 90" BBC trucks from 30,000 lbs. GVW to 120,000 lbs. GCW, with unexcelled versatility and preferred dimensions to haul biggest loads at lowest cost.



PULL HERE

HERE'S PROOF: EXCLUSIVE GMC

GMC's EXCLUSIVE V-6 TRUCK ENGINES DELIVER COST-BUSTING DEPENDABILITY AND PERFORMANCE!

Here is the popular, proved six-cylinder principle in a more compact, stronger and easier-to-service design that is setting the industry's standards today and for the future. Full-power over a broad range at low engine speed, and shortest stroke of any comparable truck-built engines, reduce power robbing wear, add to greater fuel economy and provide the desired, higher performance. Fully-machined combustion chambers assure precise combustion balance. Short, separate intake inlets provide equal fuel-air mixture for smoother, maximum power from every drop of fuel. Spark plugs are located inside the 60 degree "V" for longer life. See your GMC Dealer for all the life-extending, profit-producing advantages.



HERE'S YOUR COMPLETE CHOICE OF EXCLUSIVE GMC V-6 GAS ENGINES

MODEL	GROSS TORQUE RANGE	MAX. HP.
305A	258-260 @ 1400-2200	150 @ 3600
305B	264-266 @ 1100-2000	150 @ 3600
305C & D	275-280 @ 1100-2400	165 @ 3800
351	308-312 @ 1400-2400	180 @ 3400
401	375-377 @ 1200-2000	210 @ 3400

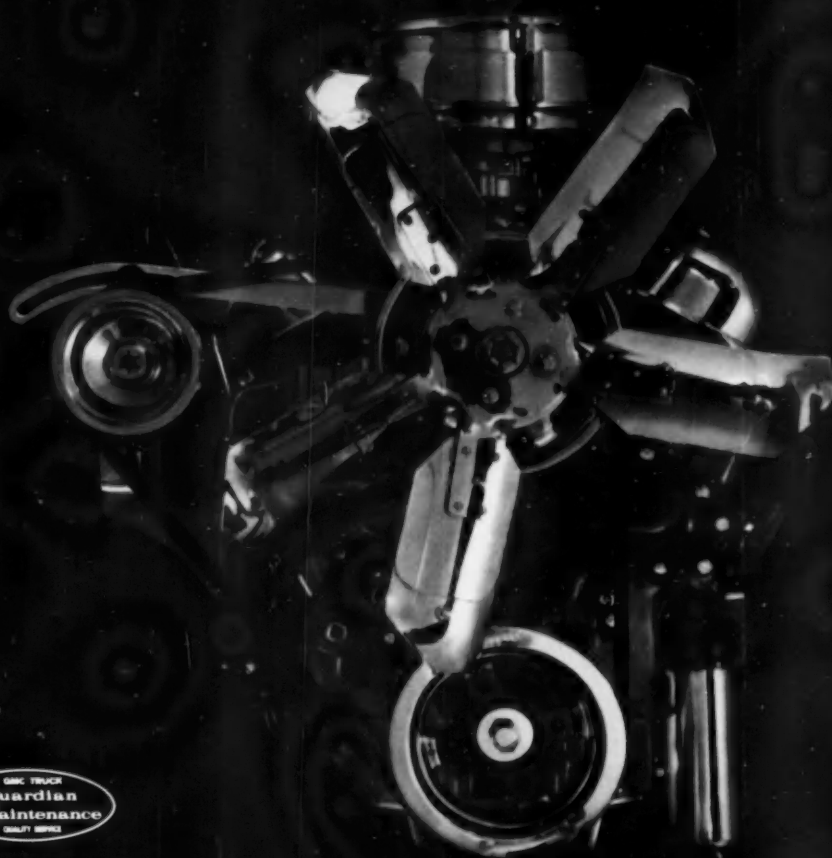
UNDISPUTED POWER SUPERIORITY! This 702 cu. in. Twin-Six gas engine produces the most power of any standard equipment engine. You get highest usable torque and horsepower over a longer, lower rpm range... great reserve power to haul loads at part throttle under normal conditions, using reserve only for hills. Results: amazing fuel economy, gear shifting reduced up to 60%, higher sustained road speeds and greatly increased engine life.



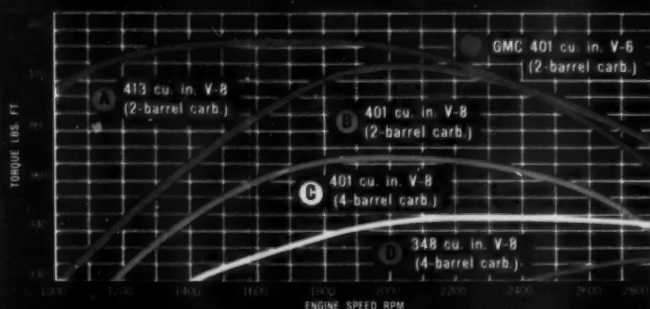
GREATEST PULLING POWER OF ALL

MODEL	GROSS TORQUE RANGE	MAX. HP.
702	625-630 @ 1400-2100	275 @ 2400

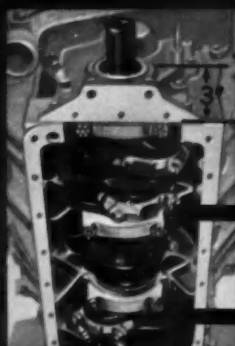
ENGINES OUT-POWER, OUT-LAST



OTHER GASOLINE ENGINES!!!



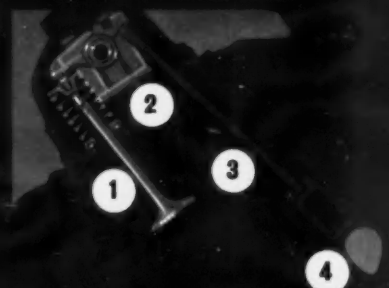
MOST LOAD-MOVING POWER! Torque is the true measure of a truck engine's working ability. These curves prove conclusively that this GMC V-6 out-works all other comparable engines—and over a broader range, and at much lower rpm . . . at engine speeds where torque is most needed . . . at engine speeds that mean less costly wear and added miles per gallon of gas.



Deep, cast-in strength with block extending 3" below crankshaft centerline, big inner ribbing and widely staggered cylinders . . . stronger, more rigid.

GMC bearings out-last others with up to 60% more area and M400 material.

Big, rigid crankshafts weigh twice as much as comparable V-8s . . . tougher, stronger to last longer.

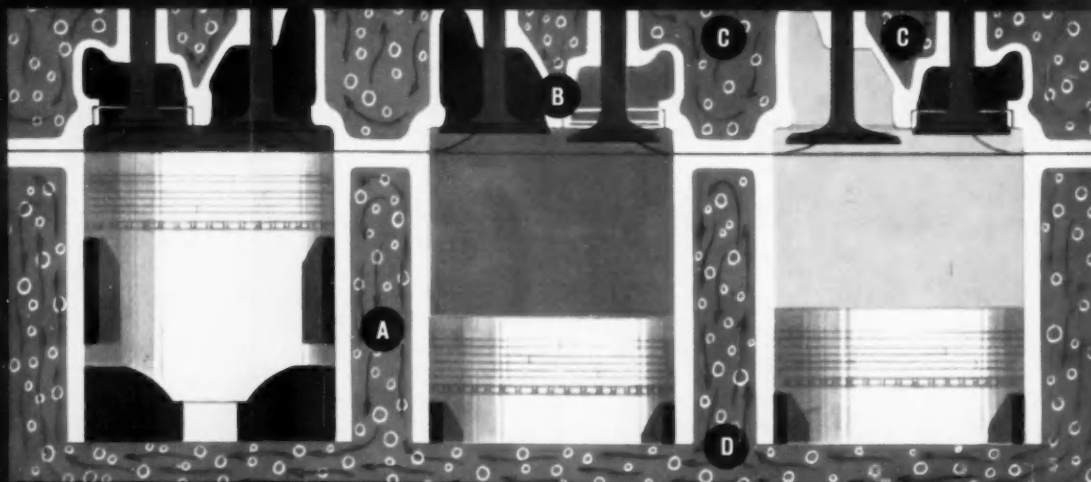


POSITIVE-ACTING, LONGER-LASTING VALVES! Both intake and exhaust valves are extra large and durable. You get big valve heads; thick, short, stiff stems; positive rotators; integral valve guides (1) . . . everything for the best sealing, less wear, free breathing and cooler operation.

Five brackets (2) solidly hold rocker shaft in exact location. Aluminum material expands to maintain correct valve-lash clearance at all operating temperatures.

Short, rigid push rods (3) are practically deflection-free.

High-mounted camshaft (4) has positive lubrication even at cold starts, to protect lobes and lifters from galling and scoring.

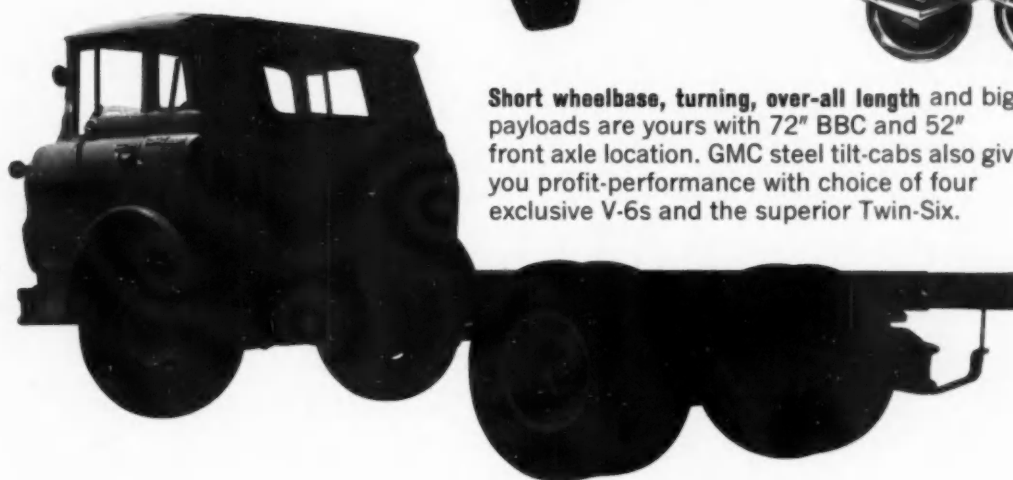


ENGINE LIFE-KILLING HOT SPOTS ELIMINATED! Water temperature varies less than 4 degrees in the entire engine. Notice the extra-wide water passages (A) completely surrounding each cylinder. See the wide-spaced valves (B) . . . the big cooling area (C) for rapid heat dissipation. New high-volume water circulation (D) up to 176 gallons per minute, assures the flow necessary for life-prolonging heat transfer. Here is proof GMC engines are built to last longer.

GMC FLEET TRUCKS ARE YOUR BEST HAULING INVESTMENT!



Highest power, and biggest payloads of all GMC Trucks—the BW9000 Series with 275 hp. Twin-Six and 120,000 lbs. GCW. Smaller 90" BBC V-6 powered models start at 19,500 lbs. GVW.



Short wheelbase, turning, over-all length and big payloads are yours with 72" BBC and 52" front axle location. GMC steel tilt-cabs also give you profit-performance with choice of four exclusive V-6s and the superior Twin-Six.

Newest, lowest-priced GMC six-wheelers with America's only V-6 power, 351 and 401 engines. Four and six-wheel 105" BBC Conventionsals completely cover the range from 5,200—48,000 lbs. GVW.



TEAR OUT AND SAVE



NOW! A high-quality FM two-way mobile radio for only \$419!

The General Electric Pacer...

... the all-new two-way mobile radio that gives you every advantage of quality FM communication at the low, low price of only \$419.00.

The General Electric Pacer gives you communication range comparable to more expensive sets. Its low battery drain (the lowest of any in its class), of 4.2 amps means no special generator, no heavy duty battery, longer battery life. A real money saver!

It is lightweight and small enough to fit even in the new compact cars with ease. Installs in minutes. *And, of course, you get the full communications quality of FM radio built by General Electric!* Channel Guard protection against nuisance calls and skip signal interference also available at extra cost.

To learn the complete details on the low-cost General Electric Pacer, look under Radio Communication, in the Yellow Pages of your classified telephone directory. Or write: General Electric Company, Communication Products Dept., Sec. 5551, Lynchburg, Va.



GENERAL  ELECTRIC

How United Motors Service helps you get better fleet performance from your Delco-Remy equipment

It's as
easy as ...



HELP FROM 39 UMS ZONE SERVICE MANAGERS (see list at right above), providing 'on-the-spot' advice and recommendations on questions involving Delco-Remy equipment.



HELP FROM DELCO-REMY SERVICE MANUALS that give step-by-step analyses of typical maintenance and trouble-shooting procedures. Available from UMS distributors, these manuals make service faster, easier.

These three easy-to-get Delco-Remy services mean reduced downtime, faster maintenance by your shop personnel, and peak performance for your fleet vehicles. How do you get these valuable Delco-Remy service helps?

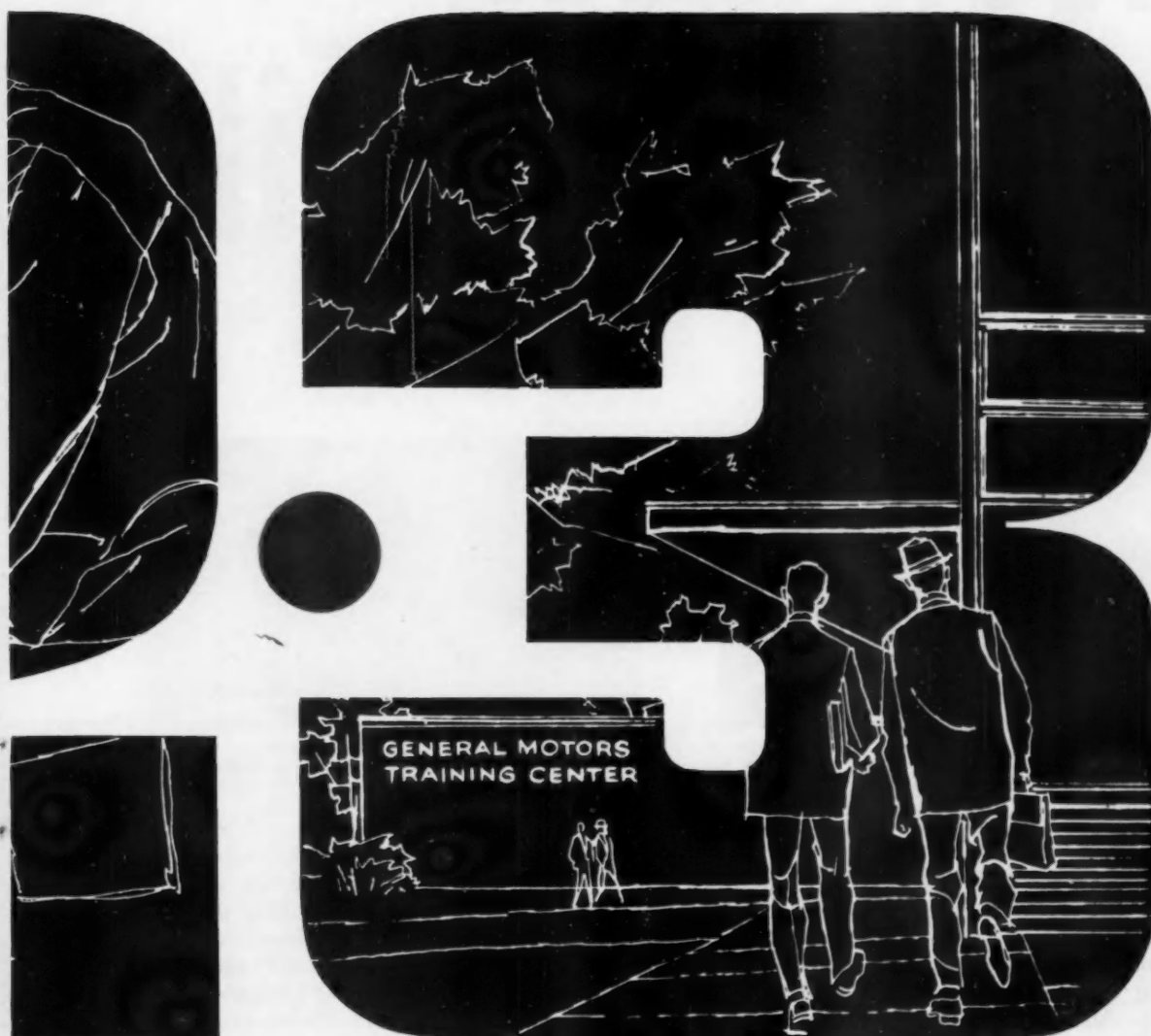
Just ask.

Talk to your local United Motors Service distributor. He'll see that you get the help you need—when you need it! He's also the man to see when you need Delco-Remy original equipment replacement parts. Look over these Delco-Remy services and decide what you need. Then, just ask!

UMS Zone Offices in Atlanta • Boston • Chicago • Detroit • Los Angeles • Minneapolis • Newark • San Francisco • Seattle • Kansas City • Dallas • Cleveland • Denver • Indianapolis • Buffalo • Philadelphia • St. Louis • New Orleans • Pittsburgh • Omaha • Memphis • Cincinnati • Charlotte • Jacksonville • Houston • Milwaukee • Washington, D. C. • El Paso • New York



UNITED MOTORS SERVICE • GENERAL MOTORS CORPORATION



HELP FROM 30 UMS-DELCO-REMY TRAINING SCHOOLS at GM Training Centers that give your service personnel detailed up-to-date information on operation, maintenance and trouble-shooting. The tuition-free courses last for one week and there is no charge for books or class materials.

new Bendix block lasts 65% "million mile"



ON MOUNTAIN ROADS, new Bendix S-1100 Heavy-Duty Brake Blocks "passed the test" with flying colors over long periods of time.



CROSS-COUNTRY RUNS were another "trial hurdle" that Bendix S-1100 blocks negotiated successfully in repeated and lengthy tests.

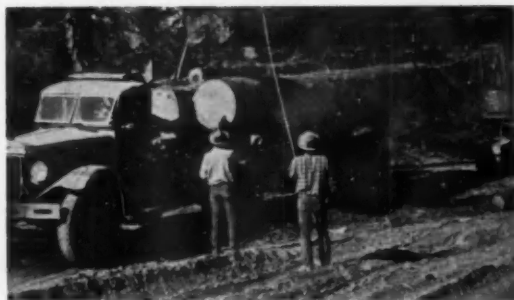
Two years of field tests have proved it! The new Bendix® S-1100 Heavy-Duty Brake Block offers more value per dollar on extra-tough hauling jobs.

On-the-job tests were given these new blocks on 161 different vehicles. They put in 1,100,000 miles of service on logging trucks, sand and gravel trucks, bus fleets, coal haulers, and other heavy-duty vehicles. Operating areas ranged from the Alcan Highway, the California "ridge run," and the Arizona and Texas desert country, to mountain runs in West Virginia and Pennsylvania.

Typical operator comments about Bendix S-1100 were: "Superior performance under heat and wet conditions"; "uniformly good braking performance." Nine out of ten operators reported longer block life than with brands previously used. The average reported was 65% to 75% longer life.

Inertia dynamometer tests in the laboratory also awarded a definite performance edge to Bendix S-1100. Wear was measured after 25 drags, lasting 30 seconds each, at successive base temperatures of 400°F., 600°F., 800°F., and 900°F. In every

heavy-duty brake longer in rugged test



HEAVY LOADS presented no problem to the time-after-time efficiency that the new Bendix S-1100 heavy-duty blocks provided.

check, Bendix S-1100 showed substantially less wear than any of the 14 other brands tested.

If your operating demands are extra-heavy, then you should investigate fully the superior-performing Bendix S-1100 Heavy-Duty Brake Block (branded in blue for easy identification). For less severe operating conditions, specify Bendix "ED" truck brake lining sets, "EM" or "S-400" brake blocks.

See your nearby Bendix distributor or write direct to Bendix in Troy, N. Y.



LOOK FOR
BENDIX S-1100 BLUE
—THE MARK OF QUALITY



Marshall-Eclipse Division
TROY, N. Y.



*Get Strength Where
It Counts in
LEAF-TYPE HINGES!*

Hansen COMMERCIAL BODY Hardware

Hansen Leaf-Type Hinges easily support the heaviest doors. Their greater strength is assured through leaf-type construction, being thickest at the base where maximum stress is located. Like all HANSEN COMMERCIAL BODY HARDWARE, they do the job expected of them... products of almost 40 years of experience in this field. Be sure... insist on... HANSEN... THE HARDWARE FOR HARD WEAR!

• WRITE TODAY for your
free Hansen Catalog 22.



A.L. Hansen MFG. CO.

5037 Ravenswood Avenue, Chicago 40, Illinois

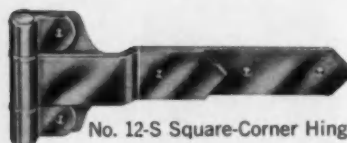
Makers of the famous Hansen Automatic Tackers, Staplers and Hansen Staples—
26 Models and 88 Staple Sizes



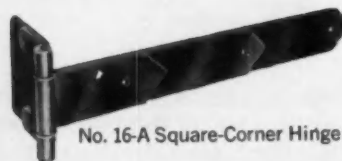
No. 19 Hinge (20" strap)



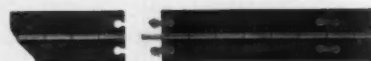
No. 12 Hinge (12" strap)



No. 12-S Square-Corner Hinge



No. 16-A Square-Corner Hinge



No. 10 Continuous Hinge



232 FORD TRUCK MODELS

now available with Clark transmissions

Yes, over 230 current Ford truck models contain Clark transmissions as either standard or optional equipment.

Most of this usage is in the tilt-cab and other *bigger* model lines.

A Clark 250V transmission, for example, is optional in the Ford C-550 line. The same transmission is standard and the Clark 265V optional in the F-700, B-700, T-700 and C-700. Same units are available in the F, B, T and C-750 (illustrated) . . . and in the Ford F-800.

Clark transmissions have proved highly reliable in all applications. They're easy to service. And the fully-synchronized 265V, by eliminating double-clutching, has been a big help in easing the driver's job.

Next time you have a chance to drive a Ford truck, note these advantages for yourself. Or write us for details on how Clark's broad line of transmissions might be applied to *your* truck, tractor, bus, or other mobile vehicle.

CLARK®
EQUIPMENT

CLARK EQUIPMENT COMPANY
TRANSMISSION DIVISION
JACKSON 3, MICHIGAN



Leading car hauler operates a fleet on less than 10 cents a mile, says...

Last April, Dealers Transport, Lorain, Ohio, operated a fleet of 200 tractors on 9.5 cents a mile. In May: 8.7 cents a mile. Year's average: just under ten cents a mile. And this included all operating and maintenance costs for tractors and trailers.

"How do we do it?" says Joe Snyder, Maintenance Superintendent. "First, we put good equipment on the

road. And, we take care of it with a complete preventive maintenance program.

"An essential part of our effective maintenance program is the use of high-quality Gulf® fuels and lubricants. Gulfube® Motor Oil H.D. furnishes complete protection for heavy duty, over-the-road service. And each engine is carefully tuned to perform



New terminal-garage of Dealers Transport at Lorain, Ohio. Thirty tractors and trailers can be pulled into the main garage floor for maintenance.



Joe Snyder, center, Maintenance Superintendent, and J. F. Gedlock and L. J. Derrick, Jr., Gulf Sales Engineers. You can count on Gulf Engineers for experienced advice and assistance on fuel and lubrication problems.

of 200 tractors "GULF MAKES THINGS RUN BETTER!"

at maximum efficiency on Good Gulf® gasoline."

Give us an opportunity to prove to you how Gulf fuels and lubricants can help you cut fleet operating costs. And see for yourself how Gulf makes things run better! Call a Gulf Sales Engineer at your nearest Gulf office. Or, write for descriptive literature on Gulf quality fleet products.

GULF OIL CORPORATION
Dept. DM, Gulf Building
Houston 2, Texas



More details? Circle 129 on reply card inside back cover

Fruehauf Reefers with 4" of Sanistruct Insulation Approved by MINUTE MAID!



The brass tag is Minute Maid Corporation's "Stamp of Approval," the result of extensive tests conducted by Stan Shillings, Minute Maid's Refrigeration Foreman, signifying that this Fruehauf reefer with 4" of Sanistruct insulation meets Minute Maid's low-temperature standards.

For the first time in its history, Minute Maid Corporation, Orlando, Florida, has permitted reefers with only 4" of insulation to transport its frozen products. The reefers—twenty-two Fruehauf Model "D" Volume★Vans—have 4" of Sanistruct, an exclusive Fruehauf advancement in high quality, low-temperature insulation. These trailers are the only 4" insulated trailers in operation that have been able to meet Minute Maid's rigid low-temperature specifications.

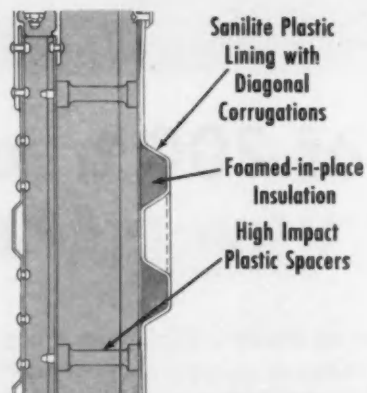
The new 1961 Fruehauf Model "D" refrigerated Volume★Vans are operated by Service Trucking Company, Inc., Federalsburg, Maryland, common carriers hauling for Minute Maid. The 4" Sanistruct insulated units have 125 cubic feet more inside cargo space than the 6" insulated reefers previously used.

Regardless of commodity hauled, distance traveled, or temperature demanded, Fruehauf has the reefer to do *your* refrigerated hauling job better! Fruehauf reefers are specifically designed to meet your exacting requirements in size, weight, cost, construction, and insulation efficiency.

Ask your Fruehauf salesman about the Model "D" reefer, and about the many other insulated Volume★Vans, today!



Fruehauf—
The Key to
Transportation
Savings!



Sanistruct Sidewall Construction—Air circulates throughout inside because of diagonal corrugations of the lining. Cooling loss reduced because of no through-metal contact.



Plenty of sales lures



AERO-SEAL JET® worm drive hose clamps

Whether you sell hose clamps, or whether you use them yourself, you'll find plenty of sales appeal in AERO-SEAL Jets. Compared with any other worm drive clamp, AERO-SEALS offer advantages in material, workmanship, and design. The patented JET feature permits almost instantaneous installation, yet the clamps can't work loose or be forced apart. The patented band slots are shaped and angled to prevent binding. A patented interlock of saddle and band is more secure than spot welding. No burrs or sharp edges, because AERO-SEALS are finished to aviation standards. Bands and saddles are 302-18-8 stainless steel. All stainless also available.

AERO-SEALS come in diameters from 7/16" to 15 feet to solve a multitude of fastening requirements. Don't accept less. Specify AERO-SEALS.

BREEZE CORPORATIONS, INC.



700 Liberty Avenue, Union, New Jersey
Cable Address: Breeze, Union, N. J.



DOWGARD® Coolant

in field tests of over

20 MILLION MILES OF PROOF!

Before putting DOWGARD Full-Fill® Coolant on the market on a large scale, we wanted proof of performance. We got it. How? In extensive tests in oil field operations, mountain and desert driving, using trucks and cars across the country, and through the cooperation of local trucking companies. The longer they operated, the more they proved that the more miles they drove the more they lowered operating costs with DOWGARD Coolant. These vehicles went more than 20 million miles to provide a graphic demonstration of our laboratory claims!

DOWGARD HELPS LOWER FLEET COSTS BY STOPPING RUST AND CORROSION DAMAGE!

Eliminates corrosion-caused repair bills! We found that one of the costliest items of fleet operation was *water*! Why? Because water (even so-called soft water) causes rust and corrosion. These deposits form every hour a car or truck drives after it has left the assembly line. (Even when it's parked.) "Good" water is none too good. And "bad" water is murder. Rust, corrosion and just plain sludge in a vehicle's cooling system can cause you more maintenance problems and down-time expense than you'd ever believe possible.

A fouled cooling system can cost you burned valves, cylinder wall scuffing, radiator clogging, higher octane requirements,

faulty pressure caps, overheating of transmission fluid . . . a score of things that would put a member of your fleet beside the road. Count it in down-time. Count it in repairs. Figure it any way you want . . . water costs you **MONEY!** Because water causes **TROUBLE!** DOWGARD Coolant will save you both.

Increases performance and economy! Sounds unlikely, doesn't it? But the coolant in your cars and trucks *does* affect performance and gas mileage. DOWGARD improves *both*. For this very simple reason. DOWGARD slightly increases the engine operating temperatures. This improves the vaporization of the fuel-air mixture, manifold and combustion. The better the vapor-



THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN

proved best for fleet use

20,000,000 miles!



izing, the more economy. This is important to the average car owner. It's vital to *fleet* operators.

Overheating? DOWGARD helps prevent that, too. Because it helps engines operate closer to optimum temperatures, DOWGARD guards against overheating long after water would have boiled away.

A must for air-conditioned cars and trucks! This same protection against overheating makes DOWGARD your best practical coolant for the air-conditioned units in your fleets. Under any high load condition (which occurs with air conditioning) DOWGARD reduces boil-outs and coolant loss. (Also protects against freezing for fleets that move from Miami to Maine in winter.)

**DOWGARD COOLANT NOW AVAILABLE IN
FLEET SIZE 55-GALLON DRUMS AT ONLY**

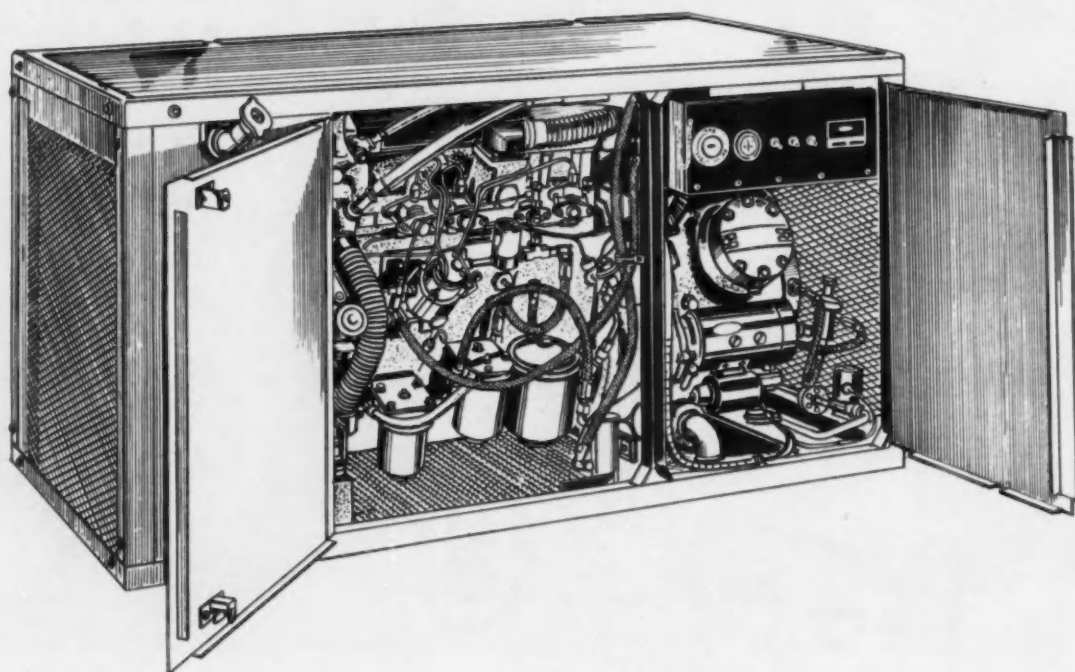
\$1⁴¹ PER GALLON
(single drum price)

Order it now through your jobber.

**A big first for fleets . . .
fill it and forget it with DOWGARD!**



PERFORMANCE and ENDURANCE



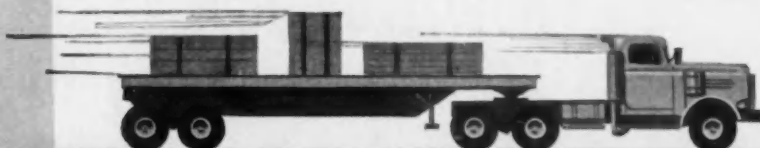
the two most important characteristics of
TropicAire-Coldmobile transport refrigeration
equipment.

TROPICAIRE
Coldmobile

McGRAW-EDISON COMPANY
TRANSPORTATION COOLING DIVISION
5201 W. 65th Street, Chicago 38, Illinois



HIGH SPEED



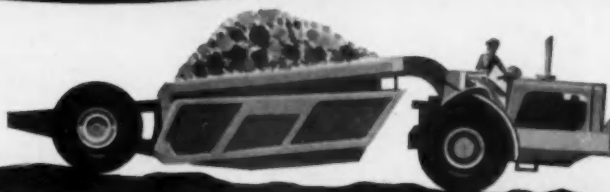
HIGH TORQUE



HEAVY GOING



HEAVY LOADS



**here's where you need the
"extra margin of safety" of SCL® lubricants**

Today's fleets must haul heavier loads faster and farther. Operating over high-speed thruways, steep mountain grades, muddy construction sites and off-highway terrain, rear axles and transmissions are subjected to punishing high speed and high torque.

Ordinary gear lubricants, adequate yesterday, are not good enough today. Now it takes SCL lubricants with their *extra margin of safety*.

Under the worst possible conditions, SCL lubes continue to protect gears and bearings against wear, scoring, moisture corrosion, premature failure. These balanced e.p. lubes keep your fleets on the move, prevent costly downtime, prolong rear axle life by hundreds of thousands of miles.

Don't take a chance with ordinary lubricants. Follow your truck manufacturer's recommendation. Get maximum protection with SCL lubricants, available world wide. For a list of over 100 leading petroleum companies marketing SCL lubes, write: The Elco Lubricant Corporation, Cleveland 9, Ohio.



®SCL is a Registered Trade Mark
of The Elco Lubricant Corp.

insist on SCL multi-purpose lubricants

manufactured and marketed worldwide by leading petroleum companies

Now...on your trucks...get an extra
tire mile for every two you run!



NEW Firestone
TRANSPORT-100* BOOSTS
TRUCK TIRE MILEAGE 50%
...AND MORE

Tune in Eyewitness to History every Friday evening, CBS Television Network Copyright 1961, The Firestone Tire & Rubber Company

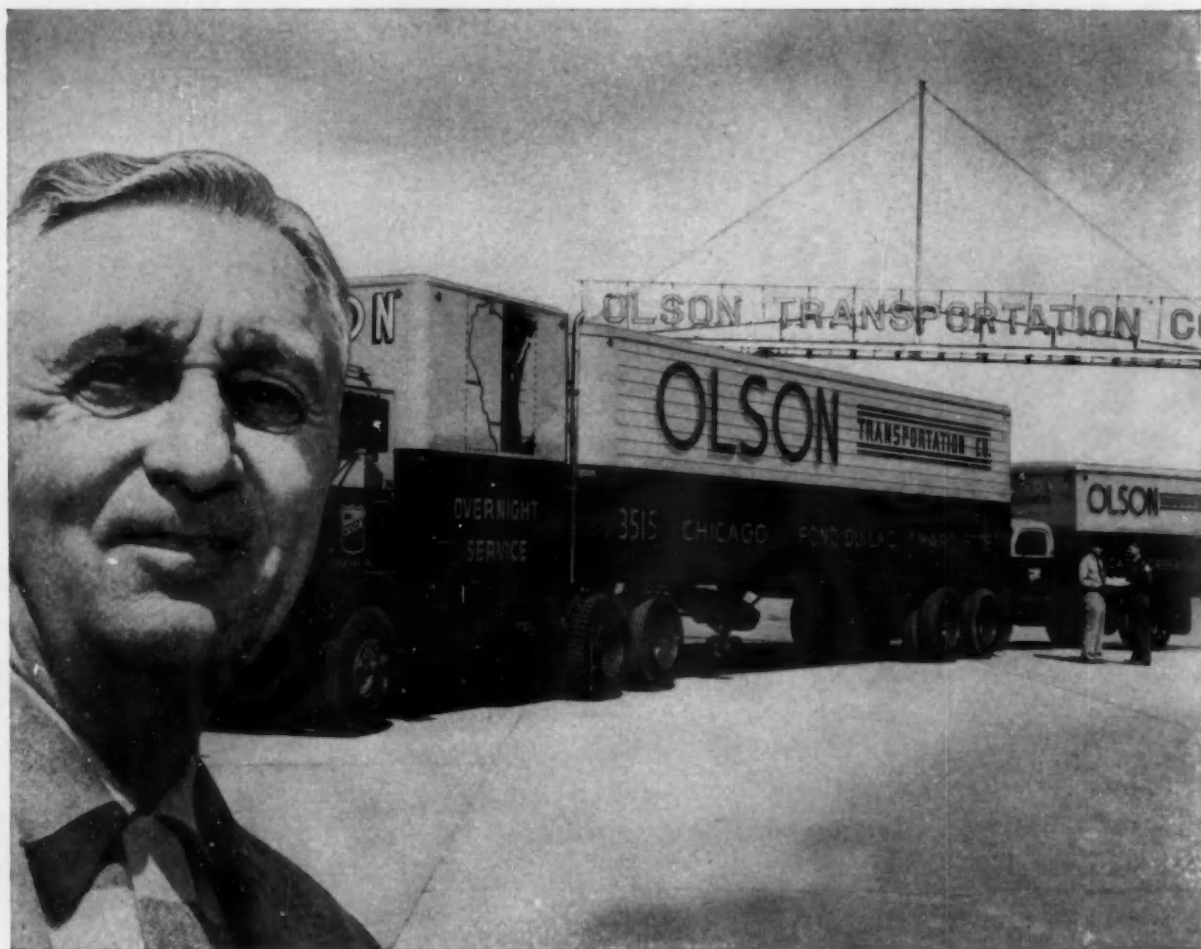


No other tire so totally new—so thoroughly tested—so completely proved. That's what you get in the all-new Firestone Transport-100, long since proved in more than 109,000,000 miles of fleet tests to bring you 50% more original tread mileage and much greater drive wheel traction. Some sound reasons why: a mileage-boosting, quiet-running 3-rib stabilized tread design. New bladed traction slots and a broader shoulder rib for far easier steering. Stop-and-go

traction power that greatly outperforms any other highway truck tire. It stops in two-thirds the distance—even on treacherous wet pavements—that most other tires need to stop. New stone guards, too, keep tread free of damaging rocks and pebbles. Get an extra tire mile for every two . . . get the new Firestone Transport-100. In Shock-Fortified Nylon or Tyrex® Rayon cord, tubeless or tubed, at your nearby Firestone Dealer or Store! ® T.M. of Tyrex, Inc. *Firestone T.M.

ALWAYS SPECIFY FIRESTONE TIRES ON NEW TRUCKS

Member of THE ATA FOUNDATION of THE AMERICAN TRUCKING INDUSTRY



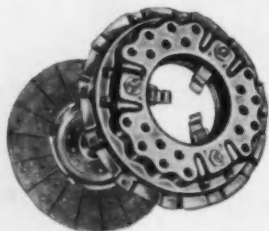
**"We average more miles with
LIPE CLUTCHES"**

says Olson Transportation Co., Green Bay, Wisconsin

M. J. Madigan, Olson Maintenance Superintendent, remarks: "Some time back, we decided to give Lipe Clutches a thorough tryout as interchanges for original equipment. Our records show that they have produced more miles before overhaul than the clutches supplied with our units when new. Needless to say, we are very satisfied with these results."

Measure Lipe Clutch value by any standard you like . . . by ton-miles per year, by number of engagements or miles between teardowns, by vehicle use per repair dollar . . . and you'll agree with reports from all over the country that Lipe delivers more profit-building performance per dollar of cost. That's why . . .

the trend is to LIPE!



You can get Lipe Factory-Exchange or interchange clutches for vehicles 18,000 lbs. G.V.W. and up. See your Lipe Jobber: He's listed in the Yellow Pages.





"COMPLETE CONTROL" MIDLAND TREADLE VALVE

TOUGH-BUILT FOR TRUCK SERVICE

COMPLETE CONTROL OF DELIVERY. Provides brake feel.

UNRESTRICTED DELIVERY CAPACITY assures speedy application . . . maximum system time-pressure balance.

COMPACT for easy installation . . . versatile for line connection.

LIGHT WEIGHT.

NO ADJUSTMENT NECESSARY. Valves are preset at assembly and no operational adjustment is needed.

CORROSION-RESISTANT. All parts are chemically treated or plated to resist corrosion.

MIDLAND



MIDLAND-ROSS CORPORATION
Owosso, Michigan





STEADY DIET: 1,830 LBS. OF PAYLOAD! The VW Panel Truck handles a payload of 1,830 lbs.—830 lbs. more than a standard half-ton truck. And the VW costs 50% less to run than a half-ton. It's 3 feet shorter, too. Easier to park.



© 1961 Volkswagen of America, Inc.

Volkswagens rack up miles and savings for rack jobber

40 panel trucks go 117,867 miles for 4.18¢ per mile

The Sav-A-Stop Corporation of Jacksonville, Florida, one of the largest rack-jobbers of non-food items in the Southeast, uses 40 Volkswagen Panel Trucks in its 85-truck fleet. Their Treasurer, Bostick Mink, says of the VWs:

"They're the most economical trucks in our fleet. In a two-month study they totaled 117,867 miles, operating for 4.18¢ per mile for gas, oil, repairs and maintenance. And they averaged 22.3 miles to the gallon.



OPEN FOR BUSINESS! Sav-A-Stop routemen have found VWs good to do business with. The Panel Truck's big (47.2" by 46") double side doors and low platform make loading and unloading

bulky cargoes easy. And there's 170 cubic feet of "elbow room" inside the VW for the driver to work in. 43.1 square feet of floor space. All of it can be adapted to your own business needs.

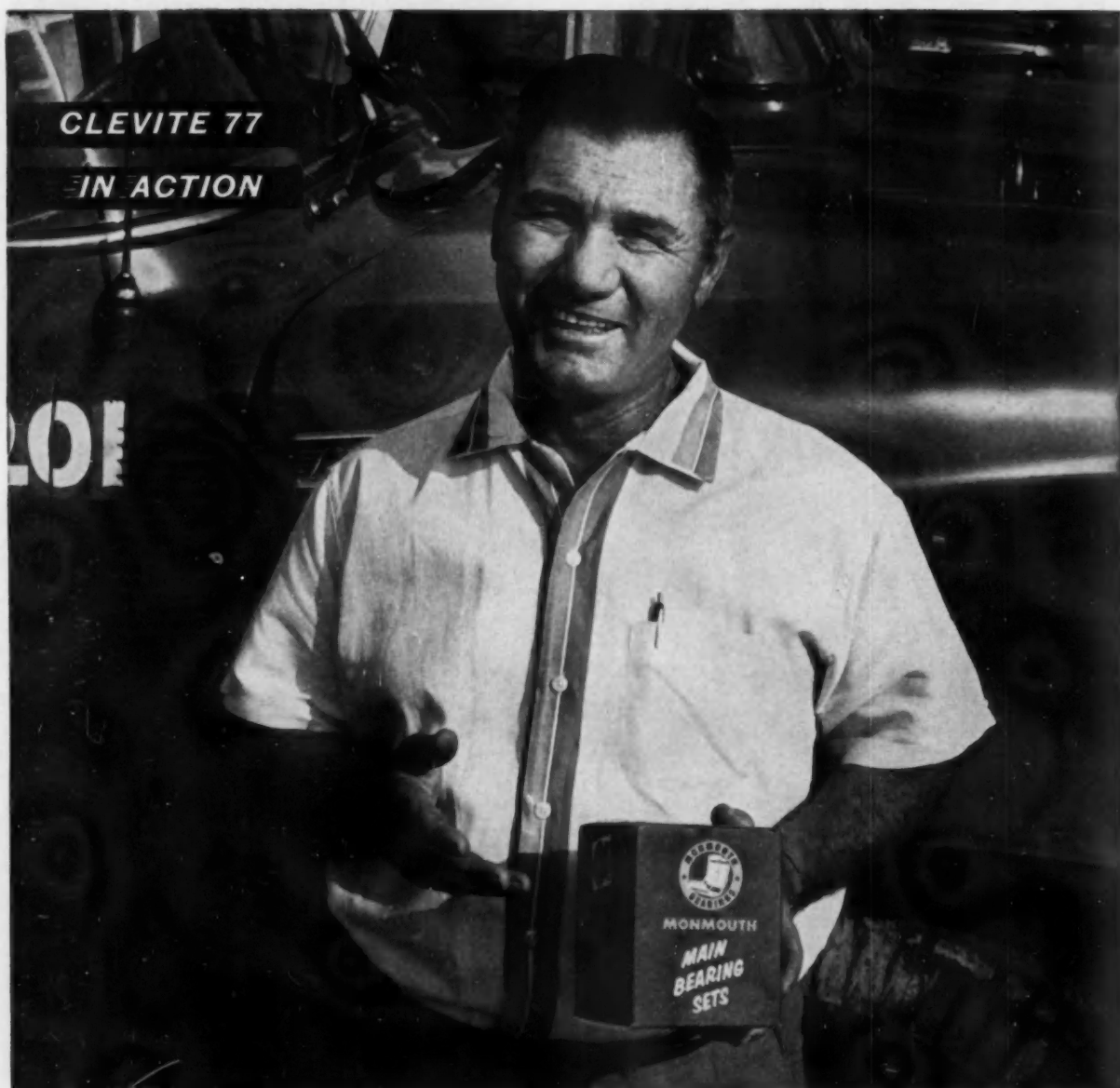
"Service is the heart of our business," Mr. Mink added, "and the VWs' maneuverability and their large cargo capacity enable our route salesmen to make more stops in less time. We've begun to trade in our other trucks for Volkswagens."

This report of owner satisfaction helps to explain why there are now over 110,000 VW Trucks in the U.S. In all 50 states. And in all kinds of businesses. Volkswagen is the advanced truck idea that's been proven on the road for the past 11 years.

Are you ready for a VW Truck? You are if you want a truck that costs less to buy, less to

operate, and less to service. The suggested retail price (East Coast Port of Entry) of the VW Panel Truck is \$1,895 (West Coast, \$2,015). To help you make the right decision, talk to your Authorized Volkswagen Dealer soon. Ask for a demonstration. And get your free copy of the 60-page illustrated booklet—"The Owner's Viewpoint." It documents with facts and figures VW Truck performance and owner experience. It shows what you can expect to get from a Volkswagen Truck, too—in convenience, economy, and all-round value for your money.





"I'm happy when my profits are high . . .

. . . and shifting to Clevite 77 bearings was the smartest move I ever made. After 14 years in this business, I know that the difference between profit and loss can be just a matter of smart maintenance. With Clevite 77 bearings in my trucks, my maintenance costs are kept down."

Other fleet operators like Mr. Rose know that Clevite 77 bearings have the built-in quality to perform at a profit. Their patented tri-metal construction gives smoother operation and longer trouble-free performance. For your next engine overhaul, get Clevite 77 from your NAPA jobber—he has a complete stock.

reports Clyde Rose
Clyde Rose Trucking Co.
Meridian, Mississippi

MONMOUTH Engine Bearings

CLEVITE SERVICE: Cleveland Graphite Bronze • Division of Clevite Corporation • Cleveland 3, Ohio



NEED A TRUCK...NEED IT FAST?



need a van, panel, pick-up, walk-in... and need it fast?

Hertz specializes in getting you the truck you want—and getting it to you fast! You get new Chevrolet, GMC or other famous make trucks. And you can choose from a wide variety of types—van, stake, panel, pick-up or walk-in. Tractors and trailers are also available in many cities. All you need is proper driver's license and identification. And Hertz low rates include insurance, gas and oil, even if bought on the road.

Play it smart! Don't tie up needed cash in "stand-by" trucks that are used only as replacements or during

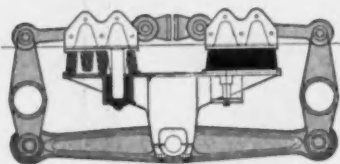
peak periods. Rent trucks from Hertz *when* you need them—and conserve your capital! Trucks are available by the hour, day or week. Also available on long-term leasing basis for economical year-round operation.

no investment... no upkeep

RENT HERTZ TRUCKS

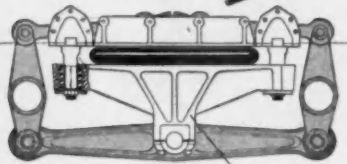
More details? Circle 139 on reply card inside back cover

You Can Tell at a Glance They're HENDRICKSON TANDEMS...



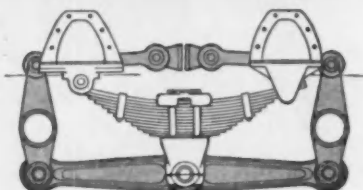
Aluminum saddle standard on "RS" Series.

RS SERIES—Rubber Load Cushion—Rubber suspension cuts maintenance, lowers weight, provides an extremely smooth ride.



Aluminum saddle and air reservoir, standard on "AR" Series.

AR SERIES—Air Springs—This lightweight unit provides the ultimate in easy riding, stability and protection against cargo damage.



RT SERIES—Steel Springs—Time-tested strength and stability, combined with exclusive Hendrickson equalizing beam design.

A Hendrickson Suspension is easy to spot from any angle. Just look at the below-axle load suspension that lowers the center of gravity while giving the torque rods the additional leverage needed to absorb road shocks. Then look at the equalizing beam which works with the torque rods to absorb strain, shock, torque and twist so completely that the springs are free to perform the sole function of cushioning the load.

Next time you see a tandem-axle vehicle, take a close look at the suspension. More than likely you'll be looking at a Hendrickson Tandem because that's what most truck buyers specify.

All Hendrickson Tandems are interchangeable between trucks, tractors and trailers as well as between makes and models of axles; parts inventories are reduced. Fleet operators can specify the design best suited for each particular operation.



HENDRICKSON MFG. COMPANY
8001 WEST 47th STREET
LYONS (Chicago Suburb), ILLINOIS

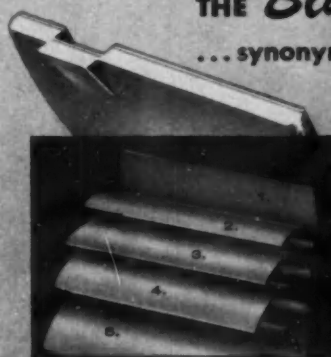
Now! the New **McQUAY-NORRIS**

MI-1000 Engine Bearing



**... longer life under
heavy loads**

THE Blue Box LINE.
... synonymous with quality



the new **MI-1000** ENGINE BEARING

1. Precision Steel Back
2. Sintered Copper-lead Lining
3. Barrier Plate
4. One thousandth of an inch Babbitt Overlay
5. Pure Tin Flash

Longer engine life—less down time—more economical operation! The new McQuay-Norris **MI-1000** engine bearing insert offers these money-saving and money-making features because they are precision built to withstand heavier bearing loads and higher temperatures.

The **MI-1000** engine bearing has an "extra thin" babbitt lining only .001 of an inch

thick, electrolytically applied on a hard and durable sintered copper-lead base. The **MI-1000** has the fine anti-friction qualities of babbitt plus the terrific strength of copper-lead—so it is easy on the shaft, yet won't pound out under the most severe service.

The combination of the **MI-1000** plus McQuay-Norris Heavy Duty, Chrome Control, Leak-Proof Piston Ring set, not only keeps the job running longer, but also cuts gas and oil costs.

Yes, the new McQuay-Norris **MI-1000** engine bearing is a natural for fleet operators. Use them on your next job.

McQUAY-NORRIS MANUFACTURING CO., ST. LOUIS • TORONTO
More details? Circle 141 on reply card inside back cover



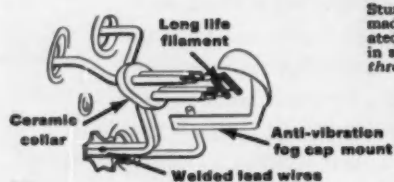
COMPLETE TUNG-SOL HEAVY DUTY LINE CREATES

New Standards for Lighting Dependability



Heavy Duty performance comes from Tung-Sol Filament Design

The most durable headlamp filaments ever developed provide the extra long life characteristic of Tung-Sol Heavy Duty Headlamps.



Sturdy twin filaments, made of special thoriated wire and connected in series, deliver up to three times more service.



631
1155
1896

Double-anchored filament of thoriated wire provides triple average service life.



1896

High impact-resistant filament helps to produce service life up to three times ordinary lamps.



1156
1157

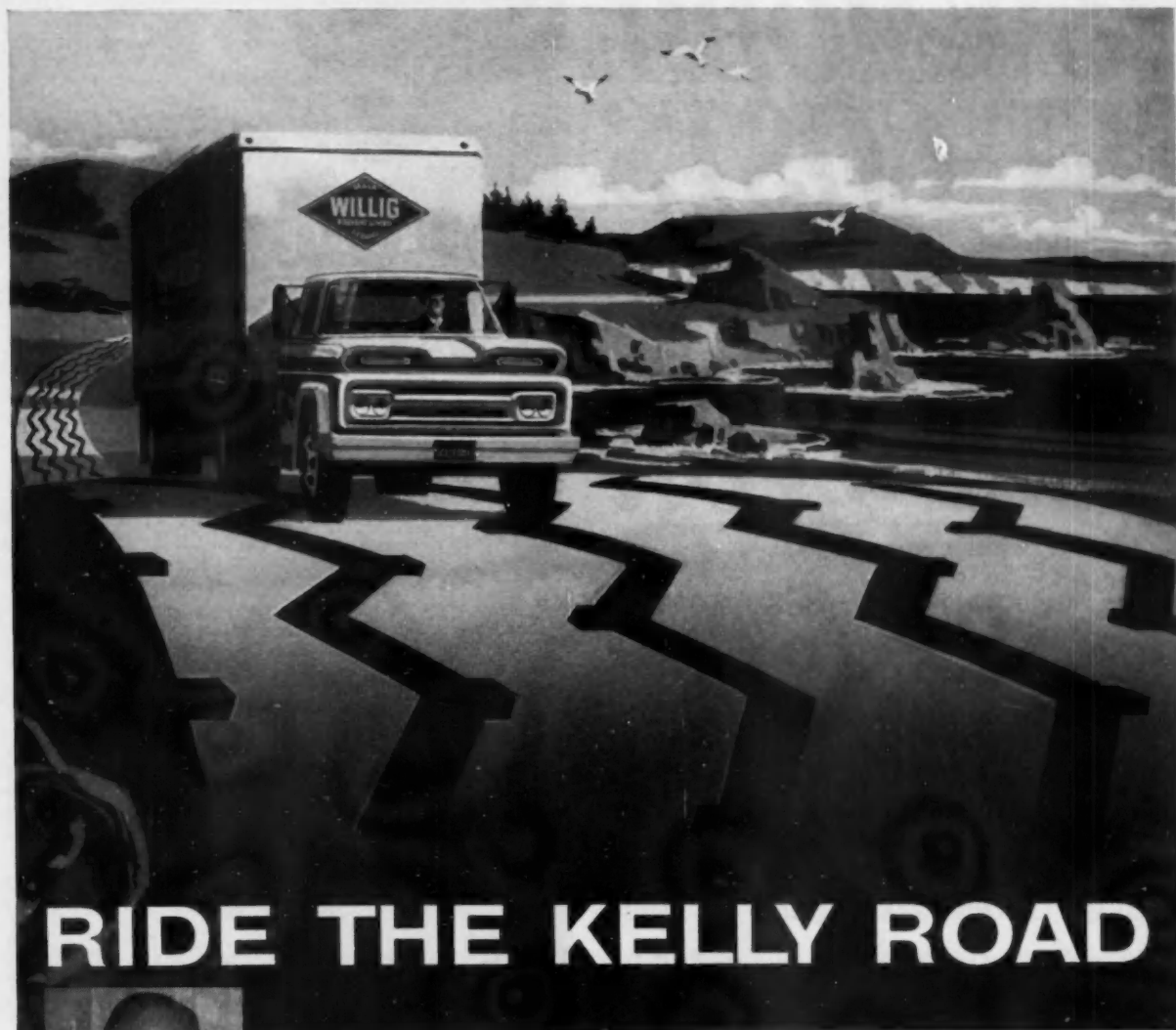
Up to 6 Lamp Signaling Capacity

535 536 537 550
Tung-Sol Heavy Duty Flashers provide exceptionally long life in meeting signaling requirements from two to six lamps.

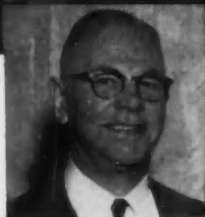


Now you can provide your fleet with a complete line of lamps and flashers designed expressly for the extremely rough service conditions encountered by trucks, off-highway equipment, police, fire, emergency vehicles and passenger car fleets. In short, here is lighting performance keyed to every requirement of fleet operation. See your Tung-Sol supplier.

TUNG-SOL
HEAVY DUTY
LAMPS • FLASHERS



RIDE THE KELLY ROAD



like Willig Freight Lines!

Edward J. Willig, President of Willig Freight Lines, San Francisco, Calif., says:

"We've used Kelly tires almost exclusively on our 300 units for years. Our records prove that Kellys give dependable, economical service and lower cost-per-mile operation. What's more, their outstanding performance has helped us maintain prompt delivery schedules, and preserve our safe driving records."

Willig Freight Lines is only one of many companies—large and small—that are finding their truck tire dollars go farther with Kellys.

Whether you operate a nationwide fleet, or a panel truck or two, there's a Kelly tire built to give you the highest performance. Get more from *your* tire investment on the longer, safer, Kelly Road! Call your friendly Kelly dealer, or write: The Kelly-Springfield Tire Co., Cumberland, Md.

KELLY CHT. Extra-heavy tread of exclusive ARMORUBBER delivers bonus mileage. Open shoulders and heat-resisting body insure cooler running. Especially suited for tractor drive wheels where tread wears fastest!



PROVED AND IMPROVED FOR 67 YEARS!

HOW MOBIL CUT COSTS \$17,837 IN 1960 FOR SILVER BROTHERS COMPANY!

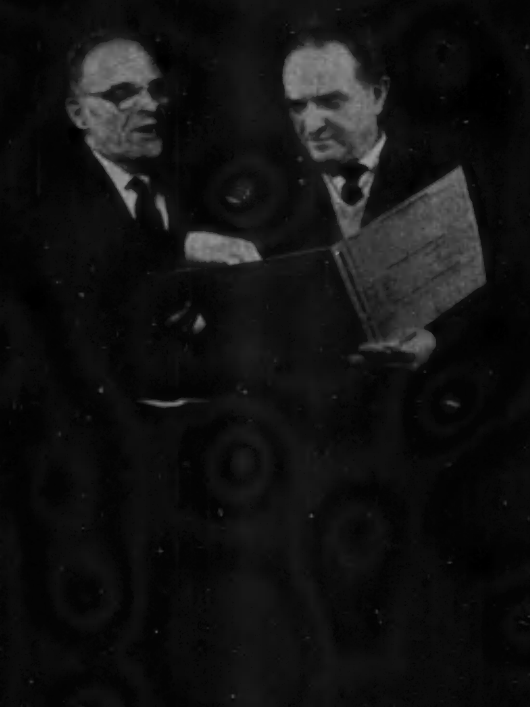
The Silver Brothers Company of Manchester, New Hampshire, producer of Cott Quality Beverages, operates one of the country's largest, privately owned fleets. Their 117 vehicles traveled more than 2 million miles last year. Every single year since 1954, when this company adopted the Mobil Program for Fleets, Silver Brothers has enjoyed *reduced* operating costs. These lower costs are brought about in the 5 fleet areas affected by petroleum products... (1) Preventive Maintenance, (2) Purchasing, Storing and Dispensing of petroleum products, (3) Correct Application, (4) Analysis of Equipment, Methods and Results and (5) Employee Effectiveness. Savings in 1960 alone totaled \$17,837 as explained.



\$4,170 *Reduction in wheel bearing failures*—Before Silver Brothers installed the Mobil Program in 1954, wheel bearing failures were common. Since then, Mobil Engineers have recommended an improved lubricant and application method which solved this costly problem, stopping road failures. The lubricant in service also eliminated the necessity for stocking two additional products, previously used in other applications. In just this one area, Silver Brothers saves \$4,170 each year.

\$13,667 *Continuing analysis of equipment, methods and results*—Periodic laboratory analyses of lubricating oil, plus systematic inspection of equipment, resulted in a series of recommendations by Mobil Engineers which affected the great majority of all vehicles in the fleet. Conservatively estimated, subsequent reductions in lubrication costs, including oil, filter replacement and labor, have amounted to \$13,667.






2,321 hrs.

Increased vehicle availability—As a result of improved lubrication practices and good preventive maintenance, Silver Brothers vehicles were available for service an additional 2,321 hours in the past year.

Employee Effectiveness—At Silver Brothers Company, the Mobil Program for Fleets provides clinics and on-the-job training to help the company's employees upgrade their skills and operate more efficiently. Pictured here, Mobil Engineer Dan Googins and maintenance personnel in recent shop clinic.



...and how Mobil can help you in 1961

"If one of your salesmen brought in \$400,000 worth of new business, I think you'd be more than happy, even if you were a Class I carrier. And yet the plain fact is, even that wouldn't benefit you as much as \$18,000 worth of savings achieved with the Mobil Program for Fleets. If you doubt it, figure it out yourself, using the net profit the average fleet owner makes on his revenue.

"Total profit . . . that's what's important. And our object is to help you make more total profit by *cutting the operating costs of your fleet*, just as we are doing for Silver Brothers Company.

"We work this way. In co-operation with your personnel, we set up a *continuing* program that helps you *reduce* operating costs and *increase* equipment life and availability. And we do this by working in the areas of fleet operation affected by petroleum products.

"We help you establish a simple, *effective* PM system. We give you the benefit of our experience in the purchasing, storing and dispensing of petroleum products, in the correct application of those products, and in analyses of equipment, methods and results. We also boost employee effectiveness by clinics and on-the-job training.

"The results *can* be spectacular. They're *always* worthwhile. And I remind you, every dollar Mobil *saves* you is the equivalent of many dollars of new tonnage, in terms of profit to your fleet. For more information about the Mobil Program for Fleets, contact your Mobil Representative, or write me, at the Mobil Oil Company, 150 East 42nd Street, New York 17, N. Y."

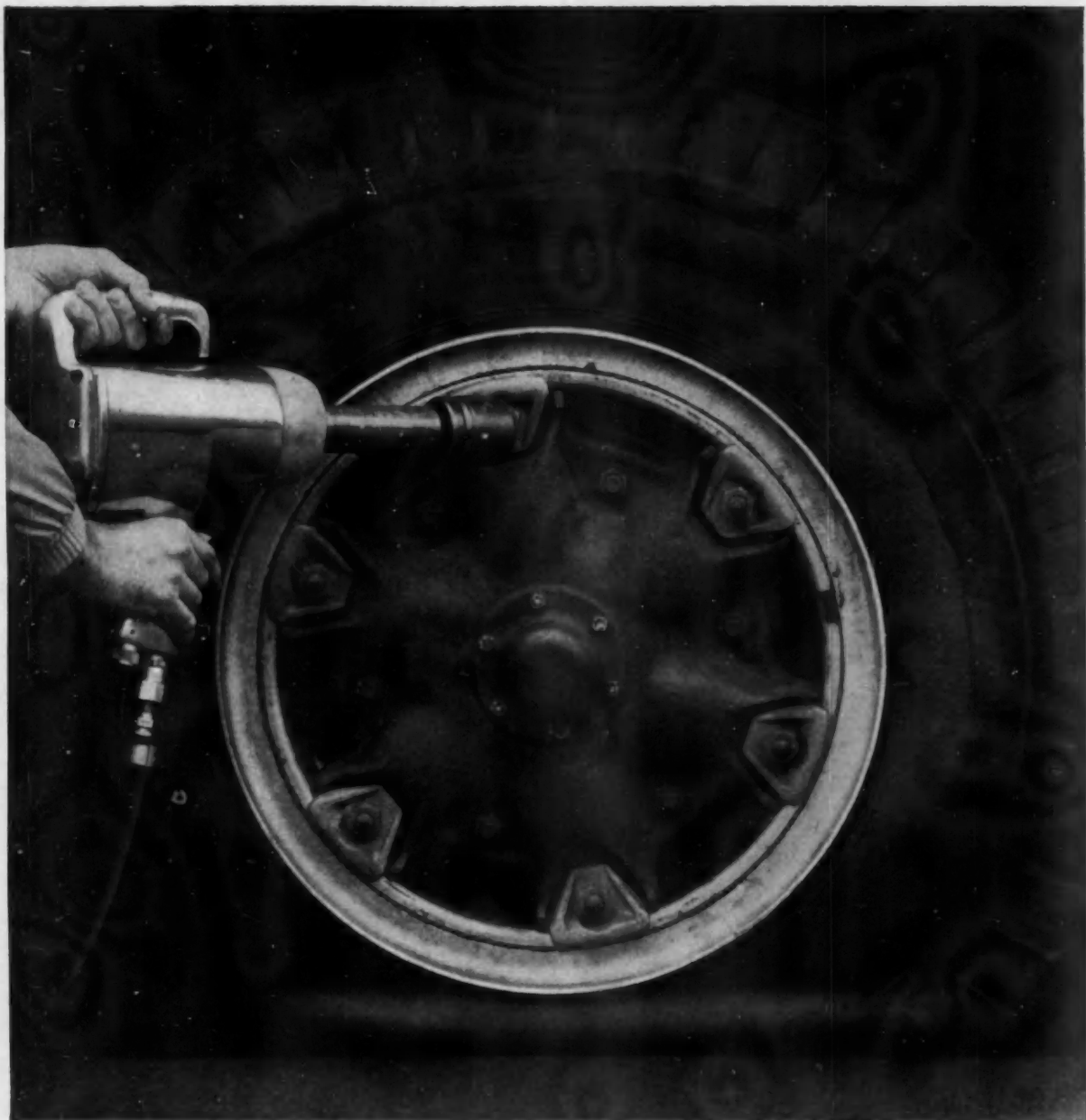
J. V. Sudler

MANAGER, FLEET SALES



PROGRAM FOR FLEETS

More details? Circle 144 on reply card inside back cover



PREVENT HIGHWAY HOLDUPS!

You'll have fewer costly delays with nylon cord truck tires

Nylon can stand up to conditions that could rupture other tire cord.

Lab tests and road tests prove it.

At turnpike speeds, nylon is almost twice as strong as rayon cord, including Tyrex rayon. It has far greater resistance to heat damage, flex break, impact damage, moisture rot. As a result, nylon cord tires reduce

downtime caused by cord failure.

And they also give you more mileage. According to a survey of truckers, nylon cord tires went more original miles to begin with; then were retreaded up to five times!

Remember these facts next time you buy truck tires: Nylon is stronger, more dependable, and more economical.



MEMBER OF THE ATA FOUNDATION

Chemstrand makes only the yarn; America's finest mills and manufacturers do the rest.

THE CHEMSTRAND CORPORATION • GENERAL SALES OFFICES: 350 FIFTH AVENUE, NEW YORK 1, N. Y.

DISTRICT SALES OFFICES: 350 Fifth Ave., New York 1; 34 Overwood Rd., Akron, Ohio; 197 First Ave., Needham Heights, Mass.; 129 West Trade St., Charlotte, N. C.; California Office: 707 South Hill St., Los Angeles 14. Canadian Agency: Fawcett & Co., 34 High Park Blvd., Toronto, Canada • PLANTS: CHEMSTRAND® NYLON—Pensacola, Fla.; ACRYLAN® ACRYLIC FIBER—Decatur, Ala.

Better products, *faster*, from your Bower Distributor:



Bower Roller Bearings take sudden shocks

Bower Bearings are engineered to take the impact of heavy shock loads in rough and tough off-highway service, as well as meet over-the-road fleet schedules with equal dependability.

Fleet superintendents who keep rigs rolling depend on Bower's high availability. Full stocks, readily available at nearby distributors, put equipment back in service faster. Prove it when your next job calls for bearings.



BOWER ROLLER BEARINGS

FEDERAL-MOGUL SERVICE

DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. • DETROIT 13, MICH.



TO MEET THE CHALLENGE OF THE FUTURE



WORLD'S LARGEST PRODUCER
OF AUTOMOTIVE
WHEELS, HUBS AND DRUMS.

Over one-million square feet of floor space
(bigger than twenty-three football fields).
That's the size of Kelsey-Hayes' new corporate
headquarters and automotive wheel
manufacturing facilities at Romulus, Michigan.

With centralized control and all facets
from development through production
under one roof, the new Kelsey-Hayes
plant is equipped with the best . . . with
everything it takes to meet the challenge
of finest in wheels for the great new cars
of the future. Kelsey-Hayes Co., Romulus, Mich.

KELSEY-HAYES

AUTOMOTIVE, AVIATION AND AGRICULTURAL PARTS. HAND TOOLS FOR INDUSTRY AND HOME.



COMPANY

OPERATIONAL PLANTS: Detroit, Jackson and
Romulus, Michigan; Los Angeles, California;
Philadelphia, Pa.; Springfield, Ohio; New Hartford
and Utica, N. Y.; Davenport, Iowa; Rockford,
Illinois; Windsor and Woodstock, Ontario, Canada.



**This
is**

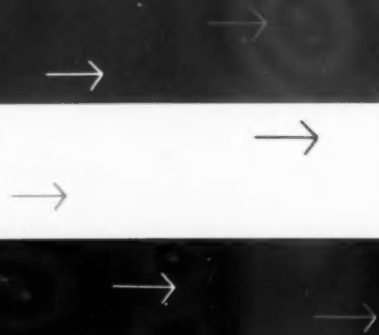
AMERICAN

OIL

COMPANY



M



May we introduce ourselves...

American Oil Company is our name. Our organization has more than 70 years' experience in the oil business. We are one of the largest petroleum organizations in America. We believe the experienced American Oil representative who calls on you, plus the products and facilities which he has at his disposal, are reasons why you will like to do business with us.



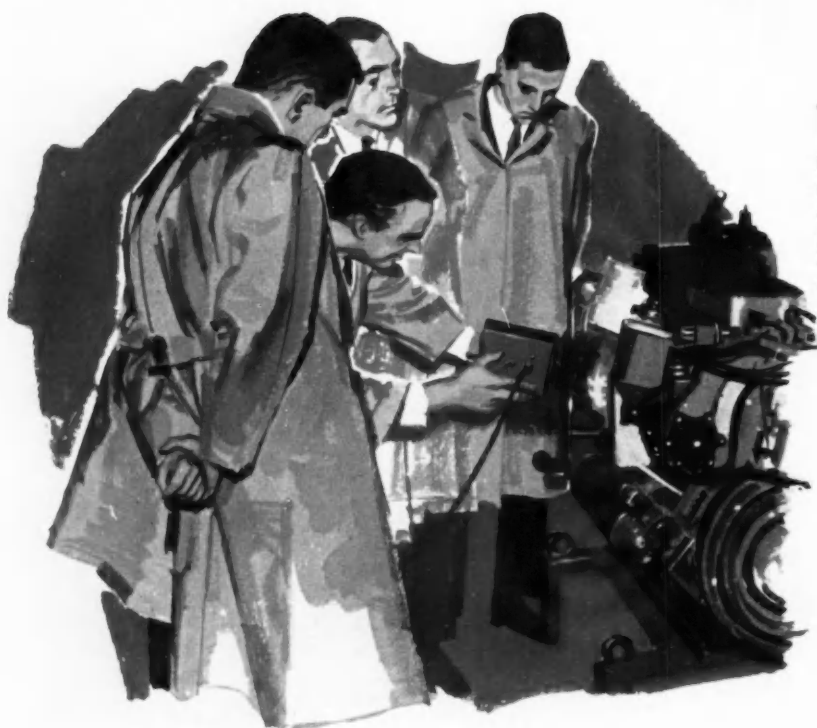
The American Oil Company representative that calls on Industrial and Fleet customers has many years of experience in this work. Because of this experience and background, he knows your petroleum product needs. He has more than 2,000 products with which to fill these needs.

Meet your American Oil

representative...

SPECIALISTS back-stop representatives

In the American Oil Marketing Technical Service Department are specialists who are recognized authorities in their fields. These senior consultants may be called in to work with you on any specialized problem you may have.



TRAINING at American's Sales School

In our Sales Engineering School a representative receives special training. After a period of instruction he is given basic instruction in the various phases of petroleum product quality control. Following a planned schedule, he receives advanced training in the course and then again for post-graduate work.

RESEARCH

Our research center adjacent to our refinery at Whiting, Indiana, is one of the largest in the world. More than a thousand research scientists and technicians are at work here developing new products and finding ways to improve present products. Their mission: To help your American Oil representative help you lower your maintenance costs and stretch your maintenance dollars.





Oil Sales Engineering School

Enroll your American Oil representative in concentrated courses of basic information covering all aspects of quality and application. Accordingly, you will receive an advanced level of graduate work.



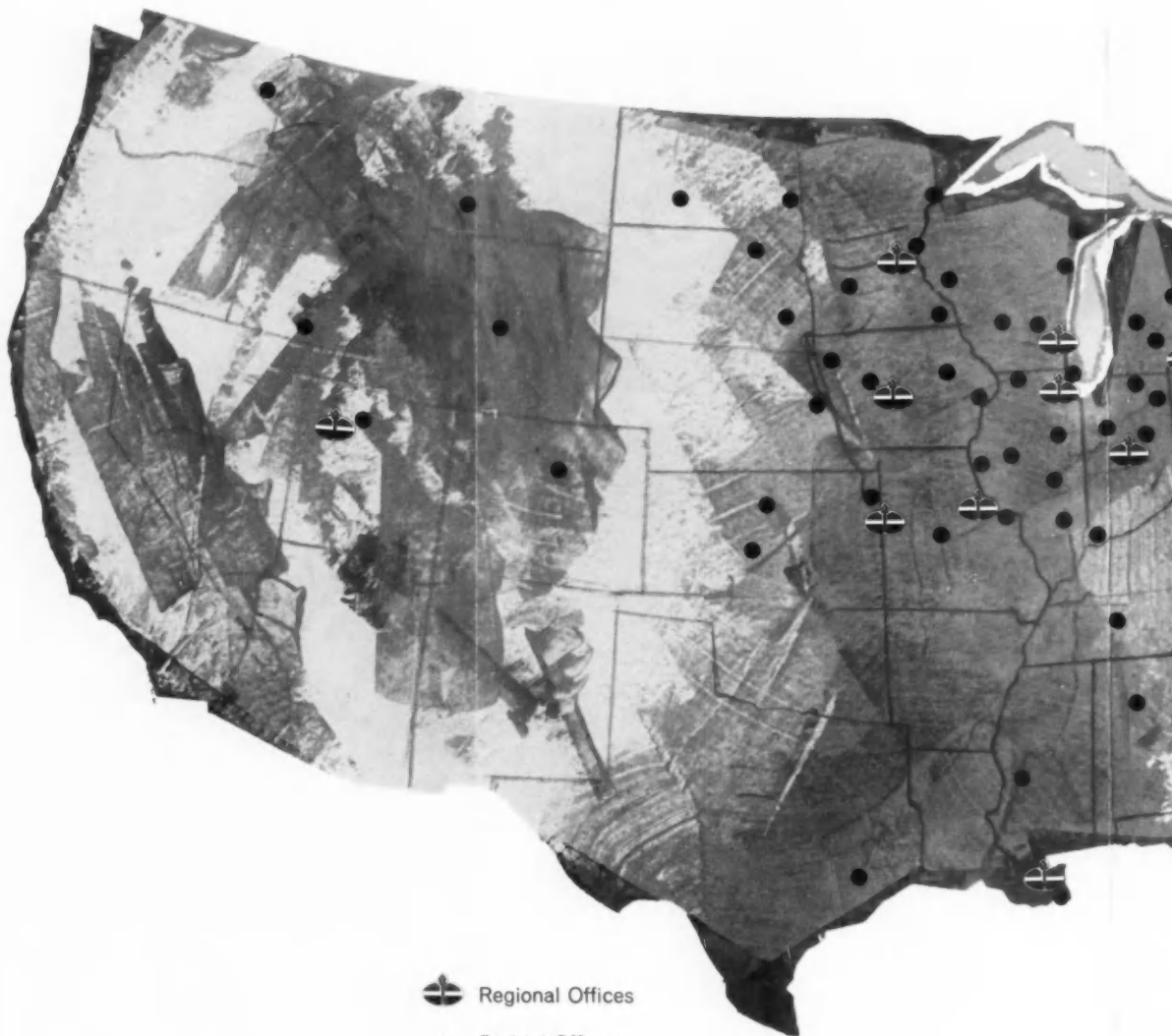
This
is

AMERICAN

OIL

COMPANY





Your representative



is always near

American Oil
 from 74 Dist
 Regional Offi
 throughout th
 to District Of
 Company rep
 phone call fro
 ucts you need
 are available
 warehouses
 maintained to



AMERICAN

OIL

COMPANY



Speed and flexibility of service begin at the refinery

nearby

Oil representatives operate District Offices. Thirteen District Offices strategically located throughout the country lend support to District Offices. An American Oil representative is only a telephone call from your office. The production need for your plant or fleet is available from upwards of 4,100 storage tanks and distribution points designed to provide quick delivery.

Twelve American Oil refineries give flexibility to production, make it possible to assure prompt delivery. Our 2,875 miles of product pipelines augment delivery facilities.

PRODUCTS available from American Oil Company

Your American Oil representative has a line of more than 2,000 products. Here are some of his most important ones . . .

Metal Refining and Metalworking Industries

AMOCUT Oils
Cutting oils for every type of machining operation.

AMERICAN Industrial Oils
Lubricating oils for many purposes.

AMOCOOL HD Soluble Oil
Heavy-duty soluble oil.

RYKON Greases
For every grease-lubricated bearing.

Mining Industry

Anhydrous Ammonia & Nitrogen Solutions

AMERICAN Diesel Fuel
Premium quality, multi-purpose.

AMERICAN HD-M, S-1, S-3 Motor Oils
Heavy-duty motor oils.

AMERICAN Industrial Oils
For general mine lubrication.

AMERICAN Regular Gasoline
For heavy-duty operation.

AMOVIS Lubricants
For gears and cables.

RYKON Greases
For every grease-lubricated bearing.

Dairy Industry

ESKAR Dairy Waxes
Premium quality dairy waxes.

Process Industries Chemical Food Paper

AMERICAN Industrial Oils
Circulating compressor and hydraulic oil.

AMODRIP Oils
Premium quality dripless oils.

Process Industries (continued)

Power Generation

Truck, Bus and Construction Equipment

Railroads Fertilizer Manufacturers For Road Construction and Industry

ESKAR Waxes
All-purpose paper-coating waxes.

RYKON Greases
For every grease-lubricated bearing.

Anhydrous Ammonia & Nitrogen Solutions

AMERICAN Diesel Oils M
Premium "MIL" diesel lubricating oil.

AMERICAN Diesel Fuel
Clean-burning premium diesel fuel.

NONPAREIL Turbine Oil
Guaranteed for the life of the turbine.

AMERICAN D&G Oils
Premium S-1 level lubricating oil for diesel and gas engines.

AMERICAN Diesel Fuel
Clean-burning premium diesel fuel.

AMERICAN HD-M, S-1, S-3 Motor Oils
Heavy-duty motor oils.

AMERICAN Regular Gasoline
For heavy-duty operation.

AMOCO Lithium Multi-Purpose Greases
All-purpose greases.

Super PERMALUBE Grease
Anti-rust, high-load carrying chassis grease.

Diesel Fuels and Lubricants

Anhydrous Ammonia & Nitrogen Solutions

Asphalt Products
Complete line.



And for fleet men, **AMERICAN'S** outstanding Truck Stop Program

A network of more than 170 American Oil Truck Stops serve fleet operators. Twenty-four hour service, repair services, simplified bookkeeping and other advantages come to fleet men who route their trucks to these stations.



AMERICAN

OIL

COMPANY

910 S. Michigan Ave., Chicago 80, Ill.

CCJ AT YOUR SERVICE—MAY 1961

By Edward K. Shea, Technical Editor

Transit men talk lube and oil

Subject of bus lube and oil change intervals brought different opinions from fleet operators who attended the annual meeting of the American Transit Assn.

Lube intervals varied widely according to type of operation and type of lubricant used. Some reported a switch to moly greases—found it worth the money due to longer intervals. Moly users say it's very important to get the front wheels off the ground for lube work, since moly grease is slippery, will work out through the easiest path—without lubing the entire joint. Several said they'd tried moly but went back to standard greases because they really didn't note any improvement.

Oil change intervals ran from 4000 to 12,000 miles, with each man arguing for his mileage. Many bigger fleets (50 to 100 buses) seem to be going to oil analysis services to determine change period. Of course, climate and operating conditions are a strong influencing factor.

Trend is away from multi-grade oils in fleets with inside storage. With outside storage, where starting is more of a problem, more are using multi-grade (10W-30) oil. Supplement 1 oils are becoming more standard on GM diesel fleets and on some gasoline jobs, although most use MS oils in gas jobs. No one reported using a Series 3 oil.

\$600 savings in used bolts

L. Pusateri of Allegheny Auto Spring Shop, Pittsburgh, Pa., says his shop has saved about \$600 re-using spring clip bolts when ret tempering springs or adding leaves. They salvage the 5- or 6-in. bolts with a pneumatic wrench. "We find that 90 per cent of them are re-usable," Pusateri says. Each of these bolts costs from 10 to 20 cents—a long-term savings.

Don't oil IHC ignition switch

Remind your mechanic not to oil the key-type ignition switch on your IHC equipment. International gives them a lifetime lubrication and any other lubricant (except graphite) can cause early failure. Dry graphite is OK in the lock cylinder, the factory says.

Replacing tappet in its bore

Something you might check your mechanic on: International says you get better wear from a tappet if it's replaced in the same tappet bore from which it was removed. It's worth the effort in overhauling to lay the tappets out in order so they can be returned to their original bores. Otherwise you may get early scuffing and wear from the tappet while it's forming a new wear pattern with the bore. Properly replaced tappets, on the other hand, return to a compatible wear pattern.

Alignment and brake training

Could your mechanics use some specialized training in front-end alignment and brake service? Ferris Institute has graduated more than 650 men from its four week-long courses. Classes are available in steering and wheel balancing, advance alignment and steering, minor body

and fender alignment or brake systems. You can get details on the program, including tuition and housing costs, by writing Ferris Institute, Big Rapids, Mich.

Some ideals for transit shops

Ideal shop setup for a 35-40 bus fleet was recommended at the annual meeting of the American Transit Assn. It's used and was explained by Fred Fey, vice president and general manager, Eau Claire, Wis., Transportation Co. His shop has a body-paint stall, washer stall, two stalls with twin-post lifts—one used for PM and light repairs, the other for major work and rebuilding—and two other stalls for general repair jobs. Equipment and tools he described seemed pretty much standard.

Fey runs the whole shop with nine people, including a working foreman and five first-class mechanics. Work week is six 8-hr days the first week (48 hrs) and five 8-hr days the second week with time and half for all work over 40 hours.

Keeping weld hoses out of way

Fruehauf Trailer Co. has made a suggestion to all of its branch managers which might be applicable in your tank fleet. When welding must be done inside a tank, keep the welding-torch hose off the bottom of the tank (Fruehauf says severed hoses have caused burns and at least one death). They suggest a small clamp with a chain loop attached. When the welder goes into the tank he suspends the hose all the way to the area where he will be working. Added bonus: It gives the welder extra room for his work.

Dodge truck starting motor

Production line Dodge PD700 trucks with 361-cu in. engine can be equipped with a heat shield for the starting motor. Company found long pulls at maximum torque produced enough exhaust heat to harm the starter. Parts men now have the air deflector plate, heat shield and clamp you'll need to equip trucks already in fleet service.

Bus men weigh engine cleaning

Engine compartment cleaning was brought up for brief discussion by bus fleet operators attending the annual meeting of the American Transit Assn. All agreed that it's a necessary expense, argument was how often it should be done. Most tie it in with a regular maintenance check—usually at 5000, 10,000 or 16,000-mile intervals. Most popular method used is steam cleaning followed by a chemical spray process or hand rubdown with kerosene.

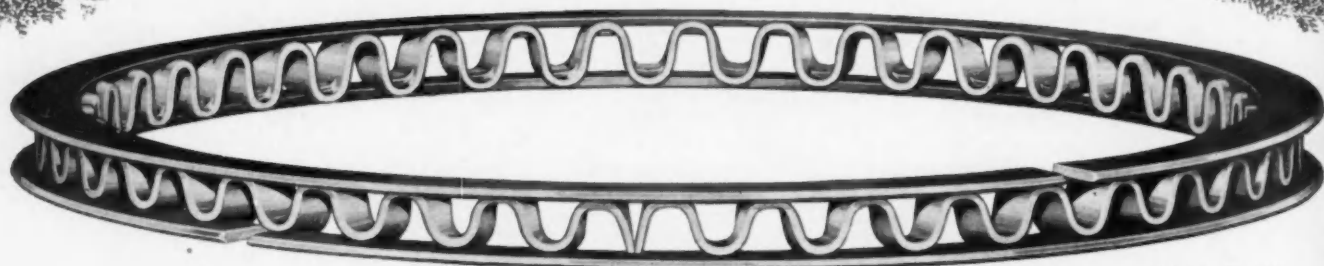
Mack EN-438 valve clearance

Mack has revised valve clearance requirements on its EN-438 engine. Reason: Excessive closedown. Have your mechanic reset valves on all your fleet's EN-438's to these settings: Inlet—.012 in. at hot idle, .014 in. at cold static. Exhaust—.025 in. at hot idle, .030 at cold static. Mack also suggests replacing the valve clearance instruction plate on the engine.

(TURN TO PAGE 168, PLEASE)

HASTINGS

Flex-Vent Oil Ring with stainless steel expanding spacer



U.S. Pat. 2,656,230

Easiest to install—can't go in wrong . . . Greatest oil drainage—can't clog

Now you can get a conformatric oil ring that's easy to install—and won't plug up.

It's Hastings Flex-Vent—the world's easiest ring to install. Spacer and rails spiral-on in no time flat . . . and you can't install them incorrectly, even if you tried.

Hastings Flex-Vent has the greatest drainage of all oil rings. You can *see* the ample ventilation that assures efficient drain-back—prevents clogging—gives long-lasting oil control.

The stainless steel spacer resists corrosion and prevents build-up of sludge and carbon deposits. Built-in tension makes this ring conform to cylinder walls in straight, tapered or out-of-round bores. Side sealing is built-in, too—for positive oil control.

This extra protection and longer life for cylinder walls and pistons is coupled with Hastings' established reputation for controlling oil completely. You'll say good-bye to trouble and have long-lived, economical engine performance.

TOUGH BUT OH SO GENTLE



TOUGH on oil pumping **GENTLE** on cylinder walls

HASTINGS MANUFACTURING COMPANY • HASTINGS, MICHIGAN
Piston Rings, Oil Filters, Casite Additives, Spark Plugs

CCJ BULLETIN BOARD—MAY 1961

We get letters . . .

Washington, D. C.

Dear Bart:

We note with some amusement, but more amazement, the cartoon appearing in the February 1961 issue of your magazine.

There has never, to our knowledge, or within the ICC's knowledge . . . (been) any accident which occurred in the manner shown in the cartoon. It is practically impossible, if not totally impossible, for an explosion to occur in the manner shown.

As you well know, we like your magazine, but we do not like to be the "butt" of your humor.—C. Austin Sutherland, Managing Director, National Tank Truck Carriers, Inc.

* * *

Mr. Sutherland's letter is right. It reflects the fine safety work done by the Conference and by the nation's tank truck fleet managers . . . and the designers of today's tank trucks and trailers. It looks like we goofed.

Standard terms give fleetmen one set of definitions for reporting accidents

CCJ safety efforts win again

For the ninth consecutive year, COMMERCIAL CAR JOURNAL has been honored by the National Safety Council for continued "exceptional service to safety" in the field of commercial vehicle fleet maintenance and operation.

Council-appointed judges annually grant the NSC's Public Interest Award to mass media which meet, then surpass, their responsibility to promote safety in the fields they serve.

CCJ is the only fleet magazine to achieve this recognition nine years in a row.

Fleet operators have, for the first time, some standard definitions for recording and measuring vehicle and passenger accidents. They should reduce confusion of conflicting definitions for fleetmen's safety records.

American Standards Assn. has published two sets of standards as agreed upon by some 3 national organizations.

Taking part in setting-up the definitions were American Society of Safety Engineers, American Taxicab Assn., American Transit Assn., American Trucking Assn., Assn. of Casualty & Surety Companies, Interstate Commerce Commission, National Assn. of Motor Bus Operators, National Assn. of Taxicab Owners, National Automobile Transporters Assn., National Safety Council and Private Truck Council of America. It was sponsored by the ATA and National Safety Council.

One standard, No. D15.1, contains definitions for motor vehicle and passenger accidents. The other, No. D15.2, contains material pertaining only to motor vehicle accidents.

Alfred C. Finch, the Safety Council's Motor Transport Department manager, says the standards are "a milestone in development of a more professional approach to accident prevention. . . ."

Need for them was recognized when conflicting definitions of such terms as "vehicle," "accident," "parking," or "passenger" were used as requirements in reporting accidents to different organizations.

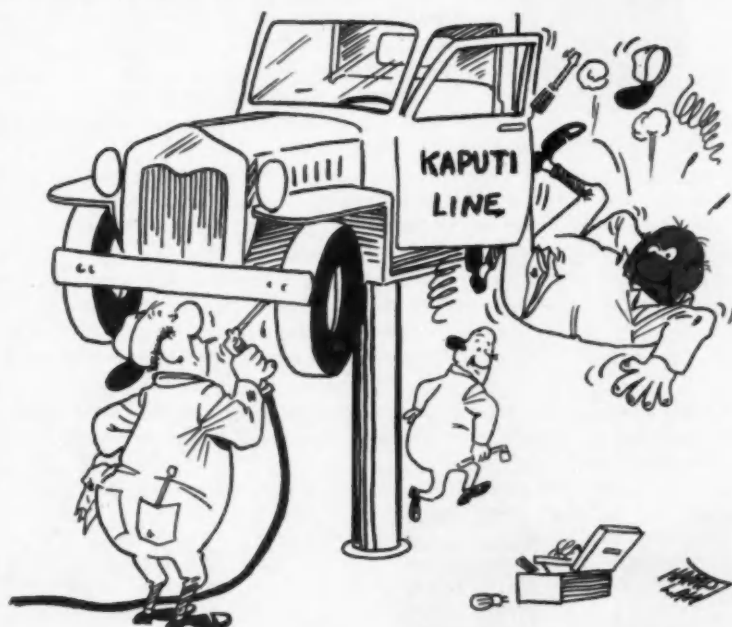
National Safety Council, for instance, is already rewriting the rules for the 1961-62 National Fleet Safety Contest, using the new terms.

"Motor vehicle" is now defined as "any mechanically or electrically powered device (except one moved by human power), not operated on rails, upon which or by which any person or property may be transported or drawn upon a land highway."

Every mile traveled, including miles traveled on private or public roads, is "mileage."

The formula for figuring accident (TURN TO PAGE 162, PLEASE)

Working inside, he didn't know



The lift arose—Look out below!



Remanufactured parts must

be good to merit this stamp of approval

To be sold under the MoPar Approved label, remanufactured parts must meet the industry's most rigid standards. The results are not just rebuilt or reconditioned parts... but MoPar *Approved R-e-m-a-n-u-f-a-c-t-u-r-e-d* Parts.

A MoPar Approved engine is remanufactured on a modern assembly line. It is stripped down, cleaned to the bare metal. Re-used components must pass exacting tests and inspections... then they are precision machined to within new part production tolerances. Genuine, *new* MoPar parts are installed. For example, *every* MoPar Approved Remanufactured engine contains new MoPar pistons (including pins, bushings and rings), new MoPar connecting rod bearings and main bearings, new MoPar camshaft bearings, new MoPar timing chain, new MoPar hydraulic tappets (where applicable). All gaskets and seals are replaced... and head and block surfaces are refaced.

MoPar Approved Remanufactured Parts are run-in and tested at the plant... before final inspection and approval.

Engines selected (called at random from production lines) get over 600 dimensional and "surface finish" checks for quality of workmanship, component parts, and comparison with original specifications... at MoPar's *Remanufacturing Quality Inspection Lab in Detroit*.

This attention to detail is the reason why you can install MoPar Approved Remanufactured Parts with such complete confidence.

Remanufactured parts available include: 6-cylinder engines—8-cylinder engines (short and complete)—V-8 cylinder heads—automatic transmissions—fuel pumps—generators and armatures—starters and armatures—voltage regulators—carburetors—clutch assemblies—crankshaft kits—oil pumps—connecting rods—torque converters.

Cut costs in the operation of your fleet. Install MoPar *Approved Remanufactured Parts* for Chrysler Corporation built vehicles—or *Rempar Quality Remanufactured Parts* for other makes of vehicles. Call your MoPar Wholesaler or Chrysler Motors Corporation Dealer... today.



MoPar Parts and Accessories,
Chrysler Motors Corporation, Detroit 31, Michigan

LAUGH IT OFF

MAINTENANCE SUPERINTENDENT:
"DOC, HOW COME WHEN I GO DOWN TO THE CELLAR I FEEL ALL RIGHT, BUT WHEN I COME BACK UP THE STEPS, I GET DIZZY?"

DOCTOR: "WHAT DO YOU KEEP IN THE CELLAR?"

Blonde Steno: "I sure don't like that new reefer driver! Half the time he wants to pet and the other half he wants to discuss literature, of all things!"

Brunette Steno: "I don't go much for books, either!"

Freight Loader: "I hear you had a lot of excitement at your party last night."

Checker: "Oh, it was really something! One little redhead was playing the violin in her pajamas and a string broke!"

Loader: "On the violin?"

Checker: "No . . . on her pajamas!"

A big van bumped the rear of a car. When the traffic officer went over to investigate, he found the woman driver slumped over on the seat.

"What happened to her?" he asked the van driver.

"I don't know officer. I just barely scraped her fender. When I walked over to her and said, 'It's all my fault, Lady. My company will see that all damages are paid,' she just stared at me, then fainted!"

— "Cici Jay" —



"Sorry to disturb you, but there are personal calls for you on all four of my phones!"

By Ted Pollock

Everybody makes mistakes,

but some of us are tiresomely long-winded in explaining them away. Here is a letter that does its job. For some reason, it arouses enough good-natured interest to be shown around by those who receive it:

Dear Mr. Smith:

You're right.

We're wrong.

We're sorry.

Sincerely yours,

Lost! More than \$1-million, weekly.

because of illegible handwriting. So says the Handwriting Foundation. Tax foulups, billing errors, misrouted correspondence and incorrect interpretation of written instructions are just a few of the costly mistakes directly attributed to a poor hand.

Are you guilty? Here's a simple way to test your handwriting: Cut a hole in a card large enough to expose one letter or number at a time. Place the card over a word or multi-digit number you've recently written. If each letter or number can be recognized out of context, your writing is completely legible. If not, mend your ways. Tip: The letters a, e, r and t and the numbers 0, 2, and 5 are the worst trouble makers. Make them particularly clear.

Looking for a fresh idea?

Pinpoint a need. It won't be hard with this proven technique: In terms of your own job or business, answer these questions:

What made me mad today? _____

What took too long? _____

What was the cause of a complaint? _____

What was misunderstood? _____

What cost too much? _____

What did we waste? _____

What was too complicated? _____

What was just plain silly? _____

What job took too many people? _____

What job involved too many motions? _____

The answers will almost certainly give you a long list of needs. Once you have them, look for ways to fill them. And there you are: Ideas!

Your telephone is a neglected public relations

tool. For instance, the entire sales staff of a midwestern tire distributor periodically calls customers to see if they have any complaints, or suggestions on how service may be improved.

A New York dentist makes it a point to call patients a month after he's completed their dental work. He asks if they're having any problems.

A southern nurseryman phones his customers after every delivery to make sure they're completely satisfied with their purchases.

Isn't there somebody you could call today—to show you appreciate his business, to nip a complaint in the bud, to pass-along an idea?

Going to a convention?

No need to walk around with your pockets stuffed with literature you receive there and want to read later. Instead, take along some stamped, self-addressed envelopes. Mail the material to yourself as it accumulates. When you return home, it will be waiting for you.

WHAT'S NEWS IN RUBBER



Talking retreads?

Protect your investment with new Butyl tubes!

The next time you mount a new retread, take a good look at the old tube that goes with it. If it is patched, worn, or out of shape, chances are it will pay you to replace it with a brand new Butyl inner tube. Here's why...

Butyl tubes hold air eight times

better than natural rubber and assure the maintenance of correct tire inflation pressure. This results in increased tire mileage and the possibility for additional retreads on the same tire casing — all for the price of a Butyl inner tube!

See your tire supplier for Butyl

tubes. Enjay does not make tubes but supplies Butyl rubber to tire and tube manufacturers.

EXCITING NEW PRODUCTS THROUGH PETRO-CHEMISTRY

ENJAY CHEMICAL COMPANY

A DIVISION OF HUMBLE OIL & REFINING COMPANY

86

More details? Circle 151 on reply card inside back cover



COMMERCIAL CAR JOURNAL, May, 1961

COMING EVENTS

DATES AND DOINGS

MAY

- 17-19 — Heavy - Specialized Carriers' Conference, Annual Convention, Chase-Park Plaza Hotel, St. Louis, Mo.
- 18—Rhode Island Truck Owners' Assn., 30th Anniversary-Annual Banquet, Sheraton-Biltmore Hotel, Providence, R. I.
- 19—National Defense Transportation Day (by Presidential proclamation), to be observed throughout the transport industry.
- 22-24—Ohio Trucking Assn., Annual Convention, Neil House Hotel, Columbus, Ohio.
- 23-25—American Transit Assn., Annual Executive Conference, Greenbrier Hotel, White Sulphur Springs, Va.
- 25-26—Committee of 100, American Trucking Assns., Meeting, Edgewater Beach Hotel, Chicago.

JUNE

- 4-9 — Society of Automotive Engineers, Transportation & Maintenance Committee, Summer Meeting, Chase-Park Plaza Hotel, St. Louis, Mo.
- 5—Oklahoma City Fleet Supervisors' Round Table, Annual Meeting, Boulevard Cafeteria, Oklahoma City, Okla.
- 6-9—Regular Common Carrier Conference, Board of Governors Meeting, Edgewater Beach Hotel, Chicago.
- 8-10—American Parts Rebuilders' Assn., Armature & Generator Institute, Technical Clinic, Mooresville, Ind.
- 12-15—National Freight Claim Council, American Trucking Assns., Spring Meeting, Sheraton-Dallas Hotel, Dallas, Texas.
- 15-17—Middle Atlantic Regional Truck Rodeo, Garden State Race Track, Camden, N. J.
- 15-17 — Texas Motor Transportation Assn., Annual Convention, Rice Hotel, Houston, Texas.
- 16-17—Pennsylvania Motor Trucking

MAJOR DATES FOR FALL

- Sept. 11-15—Society of Automotive Engineers, National Transportation Meeting, Milwaukee Auditorium, Milwaukee, Wis.
- Sept. 20-22—National Assn. of Motor Bus Owners, Annual Convention, Drake Hotel, Chicago.
- Oct. 1-5—Truck Body & Equipment Assn., Annual Convention, Sherman Hotel, Chicago.
- Oct. 8-13—American Trucking Assns. Annual Convention, Statler & Mayflower Hotels, Washington, D. C.
- Oct. 16-19—American Transit Assn., Annual Meeting, Adolphus Hotel, Dallas, Texas.
- Oct. 16-20—National Safety Congress & National Safety Council, Annual Joint Meeting, La Salle Hotel, Chicago.
- Oct. 23-25—Fleet Maintenance Exposition, Private Truck Council, Coliseum, New York City.

- Assn., Summer Meeting, Roosevelt Hotel, Pittsburgh, Pa.
- 16-18—Kentucky Motor Transport Assn., Annual Convention, French Lick-Sheraton Hotel, French Lick, Ind.
- 19—Society of Fleet Supervisors of Greater Miami, Annual Meeting, Florida Power & Light Sunshine Room, Miami, Fla.
- 21-22 — American Trucking Assns., Executive Committee Meeting, ATA Building, Washington, D. C.
- 23-24—Motor Transportation Assn. of South Carolina, Annual Convention, Grove Park Inn, Asheville, N. C.
- 25-29 — National Accounting & Finance Council, American Trucking Assns., Annual Meeting, Denver-Hilton Hotel, Denver, Colo.

- 28-30—International Truck, Trailer & Equipment Show, California Trucking Assn., Brooks Hall, San Francisco, Cal.
- 29-July 2—Virginia Highway Users' Assn., Annual Convention, Hotel Chamberlin, Old Point Comfort, Va.

JULY

- 16-19—Truck - Trailer Manufacturers' Assn., Summer Meeting, The Homestead, Hot Springs, Va.
- 20-22 — Mississippi Trucking Assn., Annual Convention, Buena Vista Hotel, Biloxi, Miss.

AUGUST

- 13-17—National Truck Rodeo, American Trucking Assns., Cobo Hall, Detroit.
- 13-17—Council of Safety Supervisors, American Trucking Assns., Annual Meeting, Hotel Fort Selby, Detroit.
- 14-17—Society of Automotive Engineers, National West Coast Meeting, Sheraton Hotel, Portland, Ore.

SEPTEMBER

- 7-9—Idaho Motor Transport Assn., Annual Convention, Sun Valley, Idaho.
- 8—Iowa Motor Truck Assn., Annual Convention, Hotel Roosevelt, Cedar Rapids, Iowa.
- 11-12 — Wisconsin Motor Carrier Assn., Annual Meeting, Lake Lawn, Wis.
- 11-15—Society of Automotive Engineers, National Powerplant Meeting, Milwaukee, Wis.
- 11-15—Society of Automotive Engineers, National Production Meeting Forum & Engineering Display, Milwaukee Auditorium, Milwaukee, Wis.
- 14-16—Indiana Motor Trucking Assn., Annual Convention, French Lick-Sheraton Hotel, French Lick, Ind.

FLEET TRAINING COURSES

For addresses of sponsoring colleges, see Page 308 of the November issue.

TOP MANAGEMENT

Northwestern University — June 19-July 21.

LP GAS TRANSPORT

Purdue University—June 21-22.

ACCIDENT INVESTIGATION

Northwestern University — Oct. 23-Nov. 10.

FLEET SUPERVISOR

Northwestern University—June 12-16.
Penn State University—Sept. 11-15.
Ontario Safety League (Toronto) — Sept. 18-22.

DRIVER TRAINER

Penn State University—Oct. 2-6.

DRIVER TRAINING

North Carolina State College (4-week courses)—June 26-July 21; July 31-Aug. 25; Sept. 4-29; Oct. 2-27; Oct. 30-Nov. 24; Nov. 27-Dec. 22.

**FEATURE
SECTION
FOLLOWS**



Try compliments



Avoid 8-ball words



Speak effectively



Write to express

JONES fleet honors 8 for driving safety

Five and maintenance are almost a constant from the to

Important
Amazing
Safety Record

of After driver a month's work to record the

Promote safety

FLEET RELATIONS

... or how to

Here are guides to smooth dealings with your employees, and hints for making the public aware of your fleet

SOMETIMES FEEL as though you've carefully chosen your words, only to have a co-worker take offense to them? Do you see a whole city waiting to be told of your fleet's services—but *telling* them is the problem?

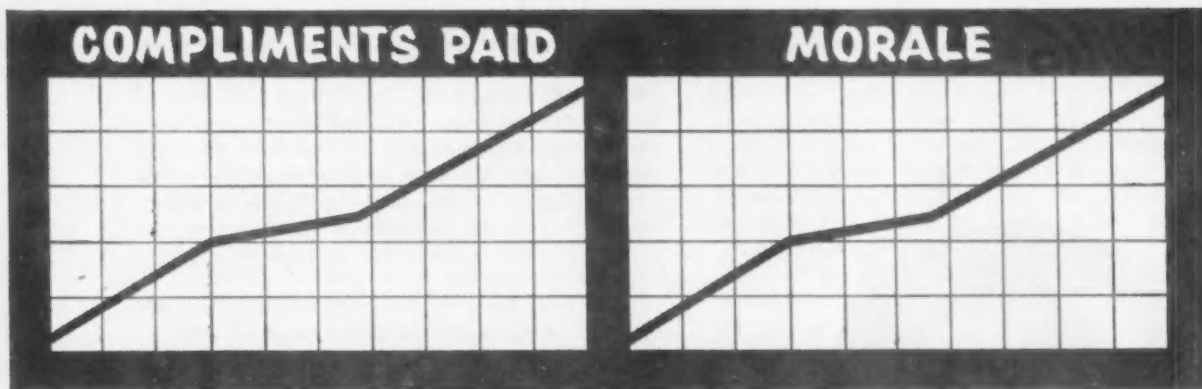
These are common worries. They fall within an area called "fleet relations."

A fleetman must deal hourly with others in his fleet. But that is not the end of his obligations. He should also be working with all of his potential customers and critics. And if he handles it correctly, he can convert co-workers into his staunch supporters, turn potential critics into tomorrow's customers.

Most of us recognize our problem areas with our fellow workers. We can often see the effects of our words or actions on their faces. Likewise evident is the need for positive work with the public at large. How to say to both groups just what we mean—there's the problem.

CCJ has condensed into the following five pages a handy reference for fleetmen. It can serve to jog your memory to perform the duties the way you know they should be done. They can also add new ideas to the ones you already use.

Follow them, and you'll put your ideas across. . . .



put across your ideas

Try compliments

NEARLY EVERYONE WANTS to do a good job. When they've done a good job, they need to be complimented. As a manager or supervisor, you can fill this need. (Compliments have been described as verbal vitamins to give employees an added lift.)

Since your compliments will likely result in your people doing a still better job, you can put yourself in line for a compliment from your own boss.

There are three types of compliments you can use:

- **First person**—you pay the compliment directly to the person who deserves it. ("I'm mighty impressed with your 5-year safe driving record.")
- **Second person**—you pass on compliments from someone else to the person who was complimented. ("The safety director was telling me about your record . . . Congratulations!")
- **Third person**—You tell the compliment to someone whom you know will pass it on to the person you want to compliment. (If you want to compliment Bill, for example, you might say to his friend Jim: "Bill sure turned in a fine suggestion the other day.")

Third person compliments can boomerang, however, unless you guard against such mis-

takes as telling one of your drivers that another man (even his friend) is "the best driver in the fleet."

Five simple principles can help guide your effective use of compliments:

1. **Compliment . . . Don't flatter.** Believe that the person deserves honest praise. Praise him honestly, based on your knowledge of facts.

2. **Turn doubts into compliments.** When you see that a person has done something well, but that he is unsure of his success, your compliment packs power when you remove his doubts. On the other hand, complimenting someone for something they take for granted is not good strategy.

3. **Be specific.** Telling a man you're pleased with his "fine safety record" is not nearly so effective as saying: "Six years without an accident is really something to be proud of." A general compliment may sound like flattery. A specific compliment is more believable.

4. **Use comparatives, not superlatives.** Words like "best" and "most" sound like flattery. Something that is the "best" leaves no room for further improvement. So when you tell a man he's the best, he suspects you're not sincere. He might be the best you've ever seen, or one of the most ingenious you've ever known. You can tell him this. But don't just say he's "the best."

5. **Vary your compliments.** Repeating the same compliment to a man makes it seem insincere. To keep your praise believable, you need variety. You can either find new reasons for



praise or vary your method (first, second or third person approach) of giving it. You can find reasons to compliment employees in their attendance, performance (specific jobs well done), safety ideas, outside achievements (sports, organization activities, etc.) and family.

Successful fleet managers and supervisors give plenty of compliments to their staffs. They know these non-financial "verbal vitamins" improve morale, increase cooperation, and get more accomplished.

Avoid 8-ball words

SOME WORDS ARE MAGIC. Some others are murder. The right word at the right time can smooth over a touchy human relations problem. But the wrong word, even though innocently expressed, can lead to trouble—and put you behind the 8-ball.

One such 8-ball expression is "In other words." Often in a conference one individual will make a statement, which another person restates. This is a good technique. It insures

that both people are talking about the same thing. Trouble develops, however, when the re-statement is prefaced with the 8-ball phrase, "In other words."

For instance, an employee comes in with a suggestion for reducing the accident rate. He has carefully considered the idea and wants to be sure it is presented right. He says seriously, "It is my considered opinion that we can cut down on accidents by holding a safety contest."

The boss likes the idea. He wants to be sure he has it right, so he repeats the idea to be sure he understands it completely. But he gets himself behind the 8-ball when he says: "In other words, you think we can reduce the accident rate by holding a safety contest."

That is exactly what the employee had in mind. He put a lot of thought into the way he said it. He felt he had made a clear-cut, well-phrased statement of the case. Now, the boss says, "In other words . . ."

"I mean . . ." is another speech mannerism that many of us use frequently. For instance, when an employee presents an idea, it is not uncommon to hear something like this:

"That is a swell idea. I mean, it will need some refinement. I mean, I think we can make it work."

Just what does he mean?

Many management men have found that they use "I mean . . ." unconsciously. It becomes a speech habit, and they are not aware of the problems that develop when they use it.

There's another trap you can fall into: Every executive has given instructions that were not followed. The employee received the instructions and simply failed to do the assigned task in the suggested way, or failed to do it at all.

"You misunderstood. Let's try it again," you say.

However, even this statement can put the executive right behind the 8-ball. In effect, you are telling the employee he is dumb when you say, "You misunderstood." His natural reaction is to think, "Well, if you could explain it carefully, I could understand."

This is a far better way of handling this problem. You can say to the employee when he fails to understand, "I failed to make myself clear."

In this statement you shoulder the blame for the lack of understanding. In the "you misunderstood" statement, you put it on the other person. And you may find yourself once more behind the 8-ball.

The short "No" is a good way to start argu-

ments. It is blunt and too brief to be effective. It is then easy for another reason to retort, "Why?" Now, you are behind the 8-ball.

One way to avoid this problem is to use the expression, "Yes, but." This shows partial agreement with the other person, yet avoids the argument that can easily develop when you make a flat refusal.

"I . . ." is the egotistical way to get behind the 8-ball with the words you use in dealing with your employees. It keeps the attention on you as an individual.

And "I" is not a word that leads to cooperation on any common problem around a fleet. It can be improved a great deal when it is changed to "we" instead of "I." This brings others into the act and makes the employee feel more a part of the organization than he does when all he hears during an interview is I . . . I . . . I . . . I . . . I . . .

Just avoiding these 8-ball words will not insure complete harmony with your employees. It will remove some of the problems, however.

Speak effectively

A GOOD SPEECH CAN BE one of your most powerful public relations tools. With few exceptions, a speaking engagement lets you deliver an extended statement to the people you want to reach at a time when they're ready to hear what you have to say.

Even a speech before a very small group can pay off for you and your company. So attention to some key details is worthwhile.

Your goal: To be the right speaker with the right topic for the audience you want to reach, with the right follow-up when necessary. To reach the goal, it's important to . . .

Choose your topic with care. In general, your strong personal interest and knowledge of a topic can lead you to good speech material. It's true that the topic must also interest your audience to attract them. But your interest is essential. It will make your speech more believable, interesting and convincing to your audience. Interest and enthusiasm are contagious.

From your point of view, such a topic makes a speech easier to prepare too. You can draw from your experience and knowledge for ideas and examples which will ring true with your audience. And while you will want to work in other people's ideas and statistics, use them

to supplement your own ideas. For a speech which you patch together from research, without the spice of your personal interest and knowledge, can be very dull, indeed.

Organize for impact. You will likely have either of two basic purposes in giving your speech: (1) to inform your audience, or (2) to get them to do something you or your company wants done. To serve either of these purposes, your speech must be organized.

An effective information speech is more than a list of facts. Ideally, it blends facts with informative incidents and, occasionally, humor. A central theme must hold the pieces together.

To get your audience to act, there are several approaches. One formula: (1) state your purpose; (2) give reasons why they should act; and (3) prove your point with examples and facts.

In some situations you may have to lay a foundation of information and build up in intensity to your call for action—almost the reverse approach to the above formula.

Still another formula, well known among instructors, is to "(1) Tell 'em what you're gonna tell 'em; (2) Tell 'em; (3) Tell 'em what you told 'em."

Speak, don't recite. Most memory work makes dull listening. A speaker who recites his speech word for word as he has written it and practiced it loses its vitality. He also runs the risk of losing his audience.

Many speakers memorize the beginning and ending of their speeches. When they have the



first part memorized they can start smoothly, free of stage fright. With the ending worked out and memorized, they build to a climax and leave the audience on a high key.

Don't miss available audiences. To benefit from a speech you need an opportunity to present it. Don't forget your local service clubs, church groups, schools and colleges, as well as program chairmen of your various industry associations.

Write to express

IT PAYS to let people know when your fleet is doing a good job. Many fleets are doing a good job, but hardly anyone outside the fleet knows about it.

So someone in the fleet has to become publicity conscious. It could be you.

If you work for a big company, there may well be an established publicity department. That makes it easy for you. All you have to do is feed news items to the department, let the publicity boys take it from there.

In smaller fleets, or for purely local news items, you may have to handle the job yourself. If you do, it helps to remember a few basic principles that will make the job easier and will increase your chances of success.

Get management's OK first. This may be obvious, but it's still an important point.

Publicity is not "free advertising." Don't expect editors to carry your sales messages in their editorial pages. But if it's really news, the editor wants to know about it.

Learn to recognize news. One way is to have a visit with your local editor. But don't walk in on him without an appointment and expect him to give you a quick course in publicity on the spot. He's probably willing to help you, but let him choose the time and place. Like you, he's a busy man.

Study the paper to see what news it carries about other companies. Study several issues. You'll see items about people getting new jobs, companies expanding their activities, adding new equipment, winning awards, making new plans, etc. Note, too, how the items are written. They give the important facts, then stop. You can keep an editor happy by doing the same when you prepare your own material.

Meet his dead-line. Find out when material has to be in the editor's hands for a particular edition. Then make sure you're on time.

Send him usable copy. Have it typed, double-spaced, with lots of room on both sides and at the top. If you don't use your company letterhead, make sure your name, company, and phone number are on the top of the page.

Give a specific time for release. It could be embarrassing, for example, if the paper came out with an announcement of a man's promotion before the company had notified him. Mark: "For Immediate Release" on news that has already happened.

Tell it simply. And stick to facts. Don't try to be colorful. What happened, or will happen? Who's involved? (And make sure you spell the name right.) Is the event unusual? Why? Where did it happen? Why will people in your community be interested? Give simple, clear answers to these questions, and then stop. Even though you're not a professional writer, you have a good chance of getting it printed.

Don't try to pressure an editor. It isn't likely to work, and it could spoil your chances in the future. He's paid to keep the people informed. But he has to select material which his readers will be most interested in. If he doesn't use your item, it doesn't necessarily mean that the editor's mad at you, or that the item's no good. Most often it means there just wasn't enough space.

Send along a photograph. A good picture is worth the small amount it costs. But be sure it's a good one. Snapshots seldom are. The editor can tell you the size he wants. Generally



a post-card size minimum will be acceptable. It should be a glossy print, with good, sharp contrast of blacks and whites. With the photo send along a "caption sheet" describing what the photo shows, identifying the people in it, etc. In listing names, standard style is to start with the person on your left as you look at the photo. If there is someone in the picture whom you can't identify, make a note of this fact on the caption, don't just ignore it.

Worth remembering, whenever you try to get publicity for your fleet, or any organization: If you supply editors with material the public will find interesting, your chances are good that it will be used.

Promote safety

ONE AREA of potential publicity for your fleet is a veritable treasure chest. That is your safety program. Around it can be built a great number of stories and promotions.

But safety news sometimes is dead in its lack of appeal. So you will probably rely on the publicity instructions in the preceding section, while applying some of these special suggestions:

Promote Your Record—Accident-free performance is a basic news element in your safety program. If the fleet as a whole sets a record or wins a safety award, that's news.

But you don't have to be a prize winner to get promotion mileage from your record. For instance in a two-inch display space in your local paper you can simply state that it has been so many days, or miles, since your fleet had an accident. You can arrange with the paper to keep the figure up to date. These ads put your record in the spotlight, of course.

At intervals you may get news recognition as your record grows. This may be based on the record itself or its comparison with your previous record.

Individual driver records are also good material. And you don't have to wait until your annual safety award meeting to recognize your drivers' records. A quick check with your drivers may show that one or more are about to hit a high, "round number" safe mileage mark. When they do, issue a news release.

Promote Your Program—While you're building your safety record you will be able to find several opportunities for publicity. Among them:

JONES fleet honors 8 for driving safety

files and next-morn- are almost a cer- stances from 600 to

Important Amazing Safety Record

id. After driving a motorist must st or spend the

Comparing National Safety Council reports and records proves the safest form of transportation ... many times safer than driving. This amazing safety record was achieved by a well planned and organized program of safe driver training. All drivers are tested physically and psychologically and then put through a rigid training course before the

rel in a sch

1. **A safety contest.** People are interested in competition. You can tell how the contest is being set up, the rules, the prizes. When it's under way you can release standings at intervals, leading up to final winner.

2. **New equipment.** Safety features on new road or shop equipment can be the basis for a release.

3. **Your safety meetings.** These offer several possibilities. If you have a guest speaker, a special program, or if your drivers come up with some bright ideas on driving techniques you may get publicity. For a different approach you might invite a local reporter to sit in on a meeting to hear the "pro's" discuss driving.

4. **Your safety department activities.** If you add people to the staff, purchase new driver testing equipment or adopt new ideas in your training program, a few details can form a release. New safety ideas suggested by your own employees and put to use in the program and election or appointment to safety committees are other possible topics.

5. **Off-the-job safety.** Expanding your safety program into areas of home or vacation safety can be a good bet on two counts. In addition to possibly saving your employees from injury, you'll find many ideas which can be passed on to the public in your publicity program.

Not every fleet can produce news material in all these areas, of course. And don't expect to see every news release you issue appear in print. Some will. Those that do will add still one more benefit to your safety program.

How YOU can control passenger

—even in a

Here's a new look at one of the toughest problems in fleet management meeting of the National Assn. of Fleet Administrators by

V IT'S ONE of the toughest problems in fleet management, but you can control passenger car PM—even in a scattered fleet.

With a mother-hen type operation—where the cars all fold up under the protective wing of a central garage every night—it's tough enough. But picture a mother hen whose brood is scattered all over the chicken yard. That's how the manager of a scattered fleet often feels.

One formula seems to work successfully though, even for scattered fleets. It goes like this . . .

- First, get all the help you can.
- Second, plan your maintenance program.
- Then, put it into use.

Take them in that order. The first makes the second easier, and the second helps make the last mountain a mole hill.

But don't wait until you are going down for the third time—when the lid has already blown off your maintenance costs—to yell for help. Do it first.

Your first source of help is the car maker. Get the factory manual on cars you have. Get on the mailing list for factory service bulletins so you can stay posted on corrections on production models. And get the name of the factory service supervisor.

Second good source of help includes your own files. Check other fleet experience. Watch for articles in magazines such as CCJ.

Then add your know-how and outline a PM program. But, make sure it actually fits your fleet. Be sure it covers what you want done. Don't run a hit-and-miss, shortcut campaign. Develop it into a thorough PM program.

ONE AID TO PM CONTROL

One aid to PM control, described by C. R. Trzcinski (General Insurance Co. of America) at the NAFA meeting, is the chart at far right. He lists each car's cost on the form. Once the whole picture's in place, he goes over it and circles the cost items that are out of line.

The two other charts (adjacent, and above at far right) will give you an idea of the fleet he operates and its average costs. Records like these are necessary in efficient passenger car fleet operation.

THE FLEET

NUMBER OF CARS:			Monthly Mileage	Aver- age
Compact	216	24%	Business 1530	87.5%
Standard	670	76%	Personal 218	12.5%
Total	886	100%	Total 1748	100.0%

ENGINE: 6 cyl TRANSMISSION: Automatic

GASOLINE: 16.4 mpg average 32.4¢ per gal.

ANNUAL DEPRECIATION: \$508 on cars sold

car PM

scattered fleet

as presented at last month's
Technical Editor Ed Shea

But more important, be sure it's easy for the driver to follow. He's using your car, but he may not be working directly for you. Keep your demands on his time at a minimum.

What you will want to include in a PM program will probably depend largely on how you compute car life. Today's trend is to trade in before you have to take the head off, especially in a scattered fleet. It helps eliminate expensive overhaul jobs thought necessary by the service man out in the boon-docks. Besides, you don't have time to run out to check them.

Early trade-in can pay off another way. What driver doesn't like to drive a new car? Generally he'll take better care of it than a tired vehicle. That extra care, in itself, can mean lower maintenance cost.

(TURN TO NEXT PAGE, PLEASE)

ITS COSTS

(average per month per car)

	Cost Per Month	Cents Per Mile
RUNNING EXPENSES:		
Gasoline		1.98
Oil & Lube		.27
Repairs		.40
Tires		.27
Total	\$ 51.05	2.92
STANDING EXPENSES:		
Accident repairs	\$ 1.50	
Insurance	6.88	
License & Taxes	2.62	
Washing & Cleaning	1.92	
Storage, Parking, Tolls	5.94	
Chains, Seat Covers, Etc.	.52	
Total	\$ 19.38	1.11
DEPRECIATION:		
Reserve	\$ 43.48	
Less: Adj. on cars sold	—10.41	
Net	\$ 33.07	1.89
TOTAL EXPENSES:		
Cost to company	\$ 97.44	5.57
Personal Use Credit	6.06	
Total	\$103.50	5.92

HOW TO SPOT OUT-OF-LINE COSTS

CAR NO.	CAR LIFE *							CURRENT YEAR TO DATE **						
	MILEAGE *		COST PER MILE - CENTS					MILEAGE		COST PER MILE - CENTS				
	Business	Personal	Gas	Oil Lube	Tires	Mot. Rep.	Other Rep.	Business	Personal	Gas	Oil Lube	Tires	Mot. Rep.	Other Rep.
1035	4414		2.24	.46				13.0	4414	2.24	.46			
1223	24794	4861	2.17	.32	.24	.16	.25	13.8	12126	2304	1.97	.35	.50	.18 .47
1224	13191	6457	2.50	.27	.38	.10	.34	12.1	5766	3210	2.52	.27	.83	.22 .50
1225	25418	7166	2.30	.24	.22	.11	.14	13.2	11923	3162	2.31	.28	.47	.11 .14
1226	18104	4793	2.23	.29	.27	.15	.06	13.7	9229	3192	2.22	.30	.50	.26 .11
1244	14918	9998	2.26	.33	.30		.16	13.6	7322	3769	2.25	.40	.68	

*—Totals for each car from date of purchase to present. **—Totals for each car for the year to date (in this case, the first nine months of 1960).

PM Control

Continued

Except for the massive first-year depreciation, you might seriously consider holding cars only one year—and riding that 12/12 warranty hard.

Here's a second rule of thumb in cutting maintenance costs: *Spend a little more on PM if it will pay off.*

If increasing PM service will cut your overall fleet costs, do it. If you can't cut costs, however, don't do it.

Remember, a small cost cut multiplied by the number of cars in your fleet and the number of miles driven can mean a good saving. If you spent a little more on spark plug service, maybe you'd get better fuel economy. If it's enough to drop a 10¢-a-mile average to 9.9¢-a-mile, you'll have a real saving.

You shouldn't have too much trouble setting service intervals on PM that doesn't depend on driver habits. You can set the oil change interval, when to lubricate and how often spark plugs need service. Use your own experience to set an economic mileage interval for items like these.

But how about brake adjustments, clutch pedal travel, fan belt tension, generator performance, thermostats, or front end alignment? Who can predict what service they need, and when? A lot of drivers can run up car-heater service bills before someone thinks to replace a defective thermostat—especially in a shop not your own.

By that time, cold engine sludge has "de-lubricated" life out of the engine.

Or how about a generator that needs new brushes? Do you know that's all the service it needs? Not really, unless you check it out. It's a simple enough job in your own shop, but how do you make a long distance check on a generator? In the meantime, what happened to the car's battery life?

Maintenance sense

How far can you trust the driver's maintenance sense? Questioning drivers of company-owned cars recently brought these answers about front end alignment and brakes:

"How often and under what conditions do you have the front end aligned?" The majority answered: "When there's a thumping noise in the front wheels . . . or when they shimmy."

To other drivers: "How can you tell the condition of your brake linings?" Answer: "If I

have a good brake pedal, then the brakes are all right."

This amplifies the need for setting up certain PM checks and not leaning too hard on the driver.

You can include such "checks" in your PM checklist . . . You can, that is, until the man in the faraway shop doing the PM comes to the word "check." It will throw him.

His first inclination will be to find something wrong—just to cover the cost of the check.

So dig into your experience. Agree with dealers on a reasonable charge for "just checking." They know—more than the driver does—the kind of trouble that can be headed off. And you won't be paying for repairs made just to cover "checking" costs.

Help them, too. Spell out details of what you want. Don't just say, "Gap plugs." Say "Gap plugs .035 in." That way he knows what you want. And you stand a better chance of getting it.

Balanced PM

One last point in planning a scattered-fleet PM program: Be sure there's balance in it. Don't put a lot of emphasis on one component, while some other part heads for short life because it's not getting its share of attention.

While making a swing around the country, the CCJ editors in their Mobile Office stopped off at a fleet to tour its shop facilities. A new car—in service just six months—was in the shop with its differential unbuttoned and on the floor.

We asked, "What's the problem?" The manager answered: "No problem, just going through a routine inspection."

It was a case of not just overmaintenance, but unnecessary maintenance.

Here's how to set up your PM program so the service man a hundred miles away does what you want. . . .

- List everything you want done.
- Keep it easy to understand.
- Avoid major repairs.
- Spend as long as it pays.
- Be specific.
- Be sure it's a balanced PM program.

Now for the big problem—control. How do you get the driver to carry it out? The best way may not come easy. But it's worth the effort. In brief:

Sell drivers on the value of the PM program. Help them understand what benefits there will be to the company—and to themselves—when they assume responsibility. Show them it's to

(TURN TO PAGE 190, PLEASE)

Cutting Passenger Car Costs

—a fleet manager's guide

by Alan E. Fitzpatrick

Fleet Division Manager, Studebaker-Packard Corp.

Here are pros and cons of company ownership, mileage payments and leasing. Which one suits you best?

▼ What can the fleet operator do about cutting fleet car costs?

Some companies switch to leasing . . . others to owning. Still others are using more than one plan simultaneously. Some are running their cars longer . . . others are retiring them earlier. And recently, many companies have turned to "compacts" as a possibility.

We, at Studebaker-Packard, are continually asked for ways to reduce these costs. The possibilities are almost limitless, but for a start you might run down the check-list on the following page.

There are, basically, three fleet plans—company-owned cars, leased cars and employee-owned cars. The hard fact is that no single method is "best" for all companies. Some firms even use all three plans at the same time. And each has its advantages and drawbacks. Any choice will be a compromise.

Employee ownership

Over half of all business cars are probably employee-owned. Direct or indirect mileage payments are made for their use.

On the surface, mileage payment appears to be a very workable arrangement. There is no company investment nor direct involvement in purchasing, repairing, maintenance or insurance.

On the other hand, there are frequent instances in which it is a high-cost plan. It is used more by small companies than large ones.

Consider mileage payment for employee-owned cars if—

- Your firm prefers to use its capital or credit for other equipment.
- There is only a short-term or sporadic need for certain cars.
- You need to release capital already invested in company cars.
- Employees' cars travel less than 10,000 miles yearly and the rate is reasonable.
- There is high employee turnover, where company cars might be abused or idle for long periods.
- Where the cost is under \$100 per month.

There are two disadvantages that are causes of much dissatisfaction with the plan. One is that it is often uneconomical for a company to pay mileage rates to cover the employee's full costs.

Also, this plan has a tendency to be comparatively high in cost. You often have little or no control over the type of car the employee drives. And, the company's choice of personnel may be restricted by the car ownership requirement.

Recently, with increased competition among leasing companies, rates have become more at-

tractive. They often claim it costs less to lease than to own. Companies which lease, however, report varying experiences. Some say it costs less. Some say it costs more. Others say costs are equal.

Leasing contracts are flexible to some extent to best suit your needs. Three basic types are . . .

1. With a *fixed-cost lease* ("maintenance lease"), the leasing company supplies cars at a fixed rate for a specific number of months. The rate usually includes maintenance, repair and insurance. The rate also includes a "pad" for depreciation and insurance.

2. You get cars, but take over and perform certain of the necessary services, such as maintenance and insurance, with a *variable-costs lease* ("net lease"). The rate is lower, of course. In effect, you speculate on your chances of handling maintenance, repairs or insurance more economically yourself.

3. With a *fleet management contract*, your firm provides the cash or credit to buy the car or fleet and you pay all the costs on a net basis. You are actually hiring a leasing company to

economic logic. Because fleets benefit from large-scale purchasing rates, company ownership should cost less than employee ownership. And, because leasing companies must make a profit, company ownership should similarly cost less than leasing.

Major advantages of owning are . . .

- A well-managed, company-owned fleet is most likely to be the lowest-cost method if the fleet is large enough. Perhaps 100 cars is a good break point.

- Ownership is particularly attractive to well-financed companies with ample reserves or those who can borrow capital for low interest rates.

- Ownership is especially economical for cars operated 12,000 to 20,000 miles yearly, or those—such as cab fleets—which top 50,000 miles a year.

- Company ownership is especially economical for cars operated over 24 or 36 months.

- This plan also allows the closest control over vehicles and might fit best if cars are painted company colors or are used in building a specialized corporate image.

Company-owned fleets must be operated most

Where can you cut operating

purchase your fleet, manage it and, finally, to trade it in for you.

Leasing may be an advantage if . . . (1) your company wants to free capital now invested in a fleet, (2) you want dependable service, (3) you wish to drop many details of fleet operation, (4) it is inconvenient or too difficult to control car costs, (5) your fleet is too small (usually under 40 cars) to merit a full-time professional manager.

Leasing may not be economical if . . . (1) mileage is low, (2) the same cars are operated for more than 24 months, (3) you have an efficient fleet operation of your own, (4) you pay unusually low mileage rates to employees for use of their cars, (5) you have high employee turnover, (6) there is an intermittent need for cars.

Owning your fleet

Fleet ownership appears to be most characteristic in larger companies. Ownership has a basic

efficiently by a competent manager who knows how to buy, sell and maintain them. A clerk can't be expected to do this type of job.

Try compacts ?

A new concept in fleets is the use of compacts. Whatever policy you follow in fleet operation, the kind of car will materially lower costs.

There is a direct cost reduction for fleets using compacts. As a group, they offer savings on all car costs. They are priced lower, cheaper to finance, use less gas and oil and are easier to maintain. In many states, compacts merit reduced insurance and license rates.

Many of the country's "blue-chip" companies, many state governments and the federal government are either trying or adopting compacts. And it seems likely that the trend toward the business use of compacts will continue to accelerate. Chief reason is public acceptance, which in turn also provides a good resale (lower depreciation) for retired fleet compacts.

costs ?

- ☐ Do we have a preventive maintenance program ?
- ☐ . . . and are our drivers following it ?
- ☐ Do we follow manufacturers' maintenance suggestions ?
- ☐ Are we using premium where regular gas will do ?
- ☐ Have we considered gasoline credit cards as a cost control procedure ?
- ☐ Do we audit dealer repair orders ?
- ☐ Do our cars favorably reflect our corporate image ?
- ☐ Have we looked at floor mats and seat covers as a way to increase resale value ?
- ☐ Are we using the lowest-cost suitable oil ?
- ☐ Do we rotate tires regularly ?
- ☐ Have tire lease and rental programs been investigated ?
- ☐ Do we know about self-insurance programs ?
- ☐ Do we have an up-to-date safety program ?
- ☐ Have we compared our car costs with other companies like ours ?
- ☐ Do we ask factory men to help us specify the right equipment and options ?
- ☐ Is our mileage-rate payment to employees fair ?
- ☐ Have we investigated leasing completely and without bias ?
- ☐ Do we know the best time of the year to trade cars for best resale value ?
- ☐ Have we investigated the cost savings of compacts ?
- ☐ Do we buy cars of a color and trim that helps resale ?
- ☐ Do we encourage automobile dealers' cooperation through prompt payment of invoices ?
- ☐ Can small automobile dealers understand our forms ?
- ☐ Have we looked at our trade-in program recently ?
- ☐ . . . is there a better way ?
- ☐ Do we consider the driver, the terrain and the driving conditions when we specify make, model and optional equipment ?
- ☐ Are we buying optional equipment that gives the best resale value ?
- ☐ Do we consider total cost—what we'll have to pay for depreciation, operation, service and repairs—when deciding the make and model to be purchased ?
- ☐ . . . or do we buy the make on which we get the lowest bid ?
- ☐ Is an engine governor practical for our cars ?
- ☐ Have we considered ways to reduce cost of insurance, licenses and taxes through the purchase of different models or makes ?
- ☐ Have we analyzed cost of outside dealer maintenance vs our own shop maintenance ?
- ☐ Would we be money ahead to keep cars longer, or replace them sooner ?
- ☐ Should we operate various segments of our fleet under different plans ?
- ☐ . . . or is one plan best for the whole fleet ?

FOR LONGER TIRE LIFE

Watch your fleet tire care program

Reported at right is a brand new look at tire cord life. It's significant, should result in better tires. But sharp fleetmen will spot something of immediate value: When looking for more tire miles, quickest and biggest pay-off comes from attention to fleet tire care . . . such as outlined below:

Six ways to lower tire costs

AT THE annual meeting of the National Truck Leasing System, O. S. Edwards, manager—National Account Sales, The Good-year Tire & Rubber Co., suggested the following six ways fleets can cut tire costs per mile.

- Select the right tire for the job.
- Maintain correct loads and inflations.
- Use a wide base rim.
- Match and rotate tires.
- Correct mechanical irregularities.
- Recap and repair before tire fails.

In Selecting the Right Tire for the Job, take into consideration: Is it a city operation—over the highway—or off the highway? Length of haul—are there many starts and stops? What type unit? Is it a tractor trailer combination—pick-up or panel—tanker or is it a stake body delivery?

Overload or Improper Load Distribution causes premature tire failure due to (1) fatigue; (2) excessive heat build up; (3) bruised breaks in tread; and (4) separation in sidewall and tread.

▼ CAN YOU punish tires more than to test them on New York City cabs?

Fabric Research Laboratories, Dedham, Mass., tried.

After checking-out 500 tires in the cab service, FRL took a second batch of tires out to Nevada and ran them too fast, too long, overloaded and underinflated.

Purpose of both tests: To find out what happens to the cord when tires fail. Does a tire fail because cords eventually lose their strength? Any clear cut answer? Not yet.

FRL suggests that failure occurs when cord-

Correct inflation is generally recognized as 75 per cent of the "battle" for reduced tire expense.

Over Inflation causes impact breaks because the tire cord is placed under abnormal tensions. When an obstruction is hit, the already stretched cords are taken beyond their elastic limit and a break occurs. Common symptoms are: (1) fast wear in the center of tread when the load is light; (2) rim damage; (3) tread cracks; (4) bead damage and (5) reduces braking efficiency due to reduced contact areas on the road.

Under Inflation causes (1) heat damage; (2) excessive wear; (3) tread and ply separation; and (4) overloads other dual when other tire is underinflated.

All tires should be sounded daily with a hammer or other tools before going on the road. If found to be low, check valve core for leak. If tubeless tire and core is leaking, use soapy suds solutions around valve at the rim. Match hand holes where disc wheels are used. Pressure can't be checked or tire inflated if valve is inaccessible. Angle valves where spoke wheels are used to insure their not riding on brake drum or resting on rim so that air chuck can be applied.



to-rubber adhesion fails, hastens to add that more testing is needed to be sure. But the FRL findings do show that today's tire cords have more than enough strength in themselves to do what fleets demand of them. In fact, indications are that the cord is a lot stronger than it need be.

In other words, it's not the cord, it's probably not the rubber . . . but it could be the bond between the two that doesn't remain as it should. But it's one of the trickiest bonds in the business. It has to combine a working range of both flexibility and rigidity. But, as mentioned above,

the answer here is yet to come. Let's look at what Fabric Research Laboratories did and what they found out.

Basic fact FRL reports is that the tire cord life line follows the pattern illustrated above. There's an initial loss in cord strength as the tire is put in service. This runs about 10 to 15 per cent, occurs within the first 20,000 miles.

This data comes from the cab fleet test in which 7.50 x 14 tubeless Tyrex and nylon cord tires were checked. Tires were studied up to 100,000 miles—with recaps after each 20,000.

(TURN TO PAGE 186, PLEASE)

Use metal valve caps on valves. This protects core from dirt and moisture plus the fact that a good cap can retain air completely even though the core is leaking. Always check pressures when tires are cold. Do not bleed hot tires when and if pressures are up.

Wide Base Rims: Using the widest recommended rim is suggested for improved tire service. Why? (1) to give greater air volume; (2) to reduce flex in bead and shoulder area; (3) to spread shock of impact over greater area of tire by strengthening the sidewall. Clean rim with wire brush to remove rust and corrosion. Apply rim lubricant before mounting tires. Remove severely bent rims.

Match and Rotate—is most important. Proper matching reduces overload of one tire in dual assembly, thus reducing excessive flex and heat build up. It also permits tires to wear more evenly. If one tire is lower in radius, the smaller is subject to scuffing and fast wear.

Mechanical Irregularities: Make regular inspections to locate mechanical conditions that affect

tires. These include alignment of front and trailer wheels. Excessive toe in causes a feather edge to appear on the inside of the tire rib—too out creates a feather edge on the outside. Trailer wheels are subject to same wear due to shift of axle caused by broken or loose torque arms.

Other mechanical irregularities to watch for are: Loose or worn bearings, U-bolts, spring and shackle bolts and faulty wheel studs and lugs; out of round brake drums which will cause wear in one spot; badly adjusted brakes which cause wear in more than one place; and locked brakes which can spell disaster.

Recap and Repair Before Tire Fails: In order to set the "lowest cost per mile average" on truck tires, it is "a must" to retread—and since a retread can be no better than the casing that is retreaded, it becomes very important to maintain tires properly and remove them from service at the proper time for retreading. By starting with a good casing and using quality materials with factory proved methods and procedures, a retread or repair can be made to deliver long dependable service.

SHOP HINTS — 10 → DOLLARS

10
DOLLARS

Send us a short description and photograph or simple sketch of the shop-made maintenance short cuts you are using. We'll pay \$10 and \$25 to those who submit good ideas

From Bill Holloway, Shop Superintendent, McGuire & Hester, Oakland, Cal.

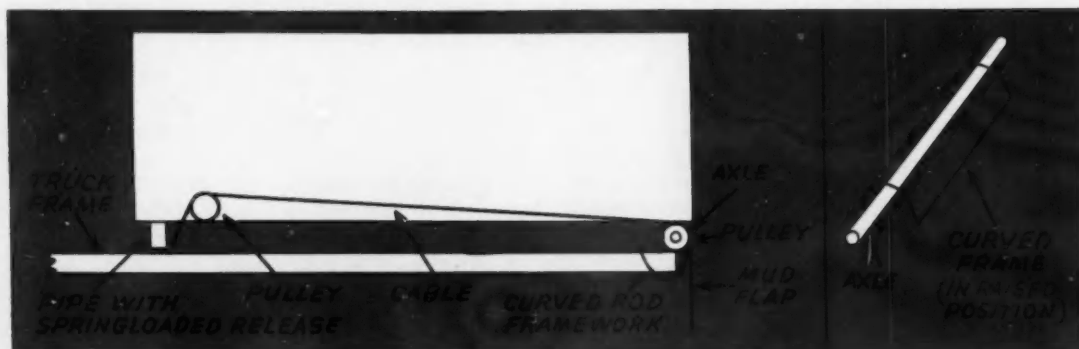
To raise mud flaps on a dump body clear of load while dumping, install a simple assembly like the one shown. This shop made them for all the dump units in its contracting fleet. It costs about \$23 in parts—saves more over cost of repeated replacement of worn or damaged flaps. When dump unit is raised as little as six in., the device rolls flaps up beside body.

A piece of 1½-in. pipe about 15 in. long is welded vertically to center-front underside of dump box. Inside pipe, secured at top, is a heavy spring connected to a rod which projects downward. Extending from the rod is a short leg with cable attached. Cable runs to nearby pulley on side of body, then

back to wrap around another pulley on end of axle at rear. Axle is installed even with rear of body, projecting on either side for full width of mud flaps. Curved frameworks of ¼-in. rod (see sketch at right) are welded on both ends of axle in line with flaps.

As body is raised, spring tension is released, pulling cable forward. This rotates axle at rear, turning frameworks counterclockwise to roll flaps up beside body.

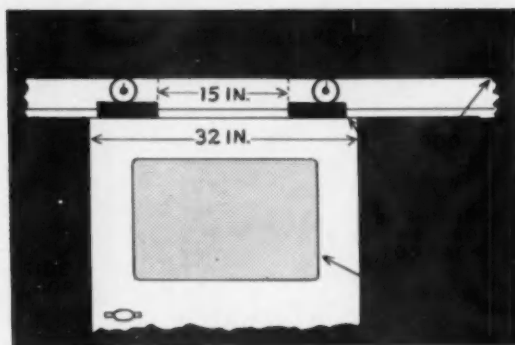
Weight of flaps pulls them down again when dump bed drops and compresses spring. As lowered flaps push frames back in place, axle is rotated clockwise taking up slack in cable.



**From Jean Babin, Garage Supt., Harrison Delivery Co.,
Harrison, N. J.**

To keep a sliding truck door on the track presented a problem for this shop on its fleet of International Metros. Causes were a little wear on the upper track and the driver reaching over to open or close the door from his seat. When he does this, he tends to pull the door toward him instead of sliding it straight back. This can make rollers jump the track.

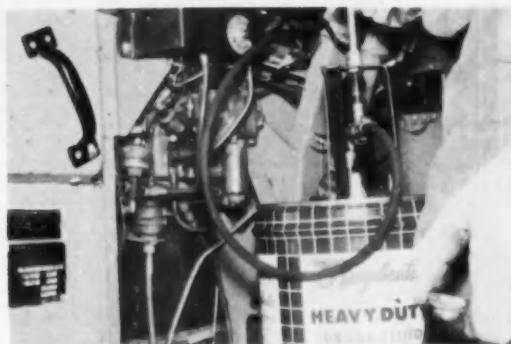
The problem was easily solved by spot welding two pieces of $\frac{1}{8}$ x 2-in. iron about 15 in. apart on the track channel, as shown. This is just enough to keep rollers on track at the places where they might slip off.



**From Fletcher D. Fleming, Shop Supervisor,
Associated Transport, Inc., Burlington, N. C.**

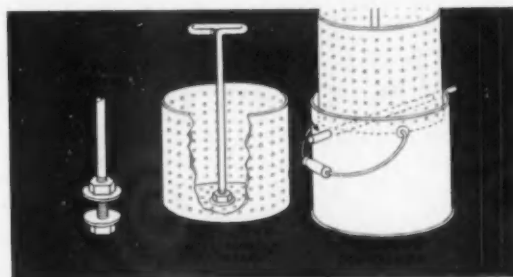
To install hydraulic fluid in cylinders, make a pump to fit right on the container in which fluid is shipped. This shop rigged-up such a device to do away with mess of transferring fluid from drum to cylinder by means of a smaller container—like a pop bottle, for instance.

The pump is an old primer—like the one used on the old Cummins single-disc fuel pump. It's mounted on a bracket made to fit the top of the drum. Inlet side is $\frac{1}{4}$ -in. copper tubing, outlet side is $\frac{1}{4}$ -in. 1525 #4 Aeroquip line, as long as is needed to do the job.



From Charles H. Willey, Route #7, Penacook, N. H.

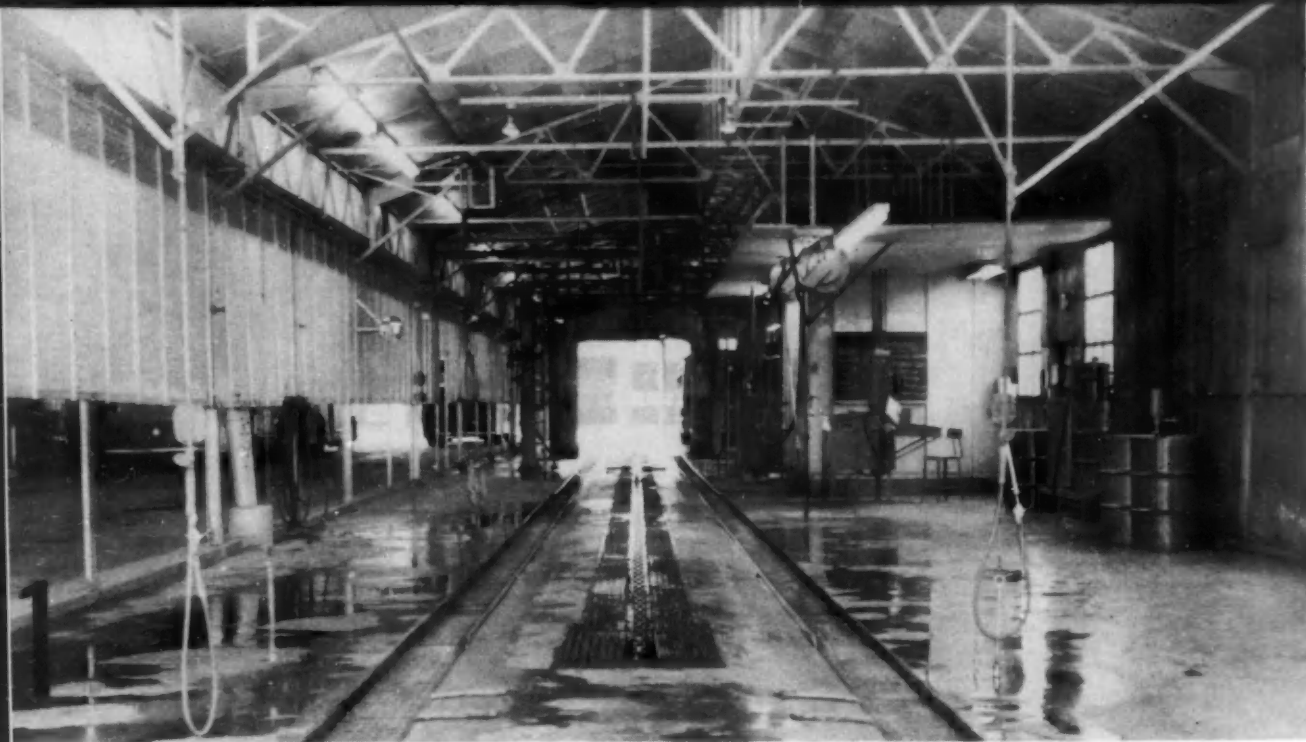
To clean small motors, pumps and parts, make your own dip basket like this one. The dip strainer shown is an old truck oil filter with a simple T-handle attached. Use a five-gal bucket or similar-sized solvent container to hold the cleaning solution. Drill two holes just below its rim to permit insertion of a rest rod. This is used to hold strainer while dripping after parts have soaked in solvent.



**From W. A. Duffy, Director of Safety & Personnel,
Davidson Transfer & Storage Co., Baltimore, Md.**

To install safety equipment on vehicles for convenient driver access, try these suggestions. Left photo shows fire extinguisher mounted on right side of cab, back of door. Red emergency signal flags are mounted over the right-hand door for quick access. Fusees can be held by a bracket mounted on door post on driver's side, as shown at right. Or, if more convenient, they can be installed on the door. In either case, driver should be able to step out of cab with lighted fusee in his hand as soon as the truck stops rolling.





Automation speeds BUS service

1 THIS VIEW looks down the entire length of Madison (Wis.) Bus Co.'s automated daily inspection line. Chain conveyor in center pulls buses through the line, with depressed troughs guiding front wheels. Trough floors are steel grid with drainage underneath, sides are lined with strap iron.

Normally, three buses at a time are on the conveyor system. Here's the way it works: The hostler drives a bus to the first position, foreground of the picture. Two depressions—one for 32- and one for 45-passenger buses—position





coaches automatically, with the nose just over the conveyor.

As the bus comes in, all external lights are turned on. When it stops, the hostler checks them all, using fixed mirrors placed fore and aft of his position.

Hostler then leaves the bus, picks up small hammers hanging on cords to thump right front and right rear tires. Next, he uses a hanging wash brush to wash (in order) the right rear wheel, the rear end of the bus and the left rear wheel. With the brush back on its hook, he

CCJ visits Madison (Wis.) Bus Co.

COMMERCIAL CAR JOURNAL's Mobile Editorial Office, with Bart Rawson and Ed Shea aboard, made a special stop to get this report on Madison (Wis.) Bus Co.'s automated service lane.

It's set up so two men—one hostler and one fueler—can put 70 buses through in one 4-hr shift! It's got some features that will surprise you. The fleet itself has some unusual characteristics too, covered later on in the article. "Quonset" building at far right in photo houses service lane described above.

then thumps the left rear and front tires with hammers hanging on that side. His last job is to push the exterior mirror on the left side inboard so it will clear the rotary wash brushes.

The hostler then walks to the far end of the conveyor, picks up a finished bus from the service lane, takes it to its "ready" spot in the parking lot.

2 AT THE second position, the fueler pushes a button that starts the conveyor. It stops automatically when the bus front door is opposite the door of the "Buck" vacuum cleaner—which automatically adjusts to the bus door opening. As the bus moves into this position, the fueler washes its front end, using a fountain brush conveniently hanging nearby.

Fueler then inserts the fuel delivery nozzle—equipped with automatic shut-off—and turns on the high-speed, 55-gpm pump. He then turns on the "Buck" cleaner and enters the bus through the rear door—placing in it a special bracket that holds it open. He air blasts the bus, working from rear to front. When the job is done, he turns off the cleaner, puts the front door lever in closed position and leaves the bus by the rear door, taking the special bracket with him.

He then goes to the rear of the coach. Here, he opens the engine compartment and checks the

3

oil level, adding oil if needed with a metered nozzle hanging from the ceiling. Next, he drains the muffler trap and ping chamber, then adds water to the radiator—also from a hanging reel.

Last step is to remove the fuel nozzle and note the added fuel, oil and water on a form on the convenient, stand-up desk. The fuel meter, incidentally, is at the desk.

Fueler then starts the conveyor again to take the bus on through the washer and also bring up the next bus from the first position.

3 BUS GOES through a Ross & White washer at position three. It gets a pressure water spray on its sides, top and *bottom*, as well as the usual scrub treatment from the rotary brushes.

When the conveyor is started again, the bus moves forward to clear the washer, automatically

Special design "dog" under front end of coaches is where conveyor hooks onto to pull buses through line

stops when it disengages from the conveyor belt. Before hostler drives the bus away, he squeegees the windshield, adjusts both mirrors and washes the front step compartment with a hanging brush.

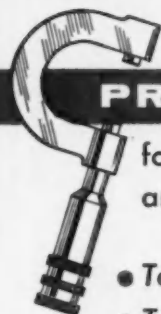
Two exit doors from the service lane are available. One is clear for immediate exit. Area just inside the other is fitted with a twin-post

(TURN TO PAGE 192, PLEASE)





ERIE WHEELS *and* BRAKE DRUMS



PRECISION BUILT

for Trouble-free Performance
and LONG TIRE LIFE

* * *

- To eliminate wheel weaving
- To prevent wobble and "tramp"

—the one-piece ERIE wheel is machined as a unit

This makes for perfect concentricity of spokes, rim lands, hub bearing seats and brake drum pilots. Drums, too, are made with the same care, machined to a tolerance of .003".

Send for ERIE WHEELS Brochure "B"

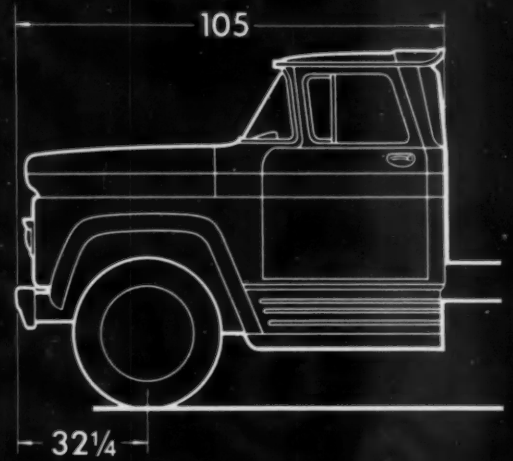
"ERIE" QUALITY PAYS TON-MILE DIVIDENDS

ERIE — *Wheels*
Brake Drums

AUTOMOTIVE WHEEL DIVISION ERIE MALLEABLE IRON CO., ERIE, PA.
Manufacturers of Commercial Truck-trailer Wheels and Brake Drums



Conventional



Low Cab Forward



Tilt Cab



YOU GET THE WIDEST CHOICE OF CHOICE EQUIPMENT IN CHEVROLET MEDIUM- DUTY TRUCKS!

Cost-choppers for every chore—a long lineup of rough-and-ready Chevrolet middleweights, each one built to squeeze bonus earnings from your roughest runs. Just check this model choice for size: *Economical Conventional Cab* trucks with the strength and stamina to make short work of mean medium-duty hauls; *space-saving Low Cab Forward* Chevies for bigger bodies and payloads and easy short-wheelbase maneuverability; *short new Chevrolet Tilt Cab* trucks with a combination of ride, roadability and cargo capacity that's unsurpassed in the tilt cab field. Only Chevrolet gives you so wide a selection of middleweight might and muscle.

PICK YOUR JOB-TAILORED CAB TYPE—If your kind of hauling calls for a conventional cab truck, chances are you'll find one of Chevy's 58 models exactly suited to your needs. With GVW's ranging from 14,000 to 19,500 lbs. plus the toughest truck components, these Chevies know how to hold costs to a minimum.

Or, if your work requires maximum payloads and maneuverability, check Chevy's lineup of 18 Low Cab Forward models. Only 93¼ inches long from bumper to back of cab (90 inches on tractor models), these LCF's are plenty short to haul 40-foot trailers without exceeding 50-foot length limits. And LCF short-wheelbase design means easy handling.

And for the last word in big payload efficiency, look into Chevy's 8 medium-duty Tilt Cab trucks. They give you bonus payload capacity stemming from a 72-inch bumper-to-back-of-cab dimension . . . unsurpassed maneuverability . . . ideal weight distribution for handling king-sized payloads . . . and total engine accessibility for quick, easy maintenance.

Whatever cab type you choose, you'll get all the comfort you can use. Plenty of head, hip, leg and shoulder room . . . foam cushioned seat, non-glare instrument panel and big, full-view windshield.

CHOOSE TOUGH-TRUCK 6 OR V8 POWER—Durable power that never stops saving in four Chevrolet medium-duty

truck engines. For top-dollar economy, there's the famous 235.5-cu.-in. Thriftmaster 6, standard in Series 40 and 50 models; or you may prefer the lively Trademaster V8, optional at extra cost. Or, if you're looking for maximum torque and power you can choose either the 261-cu.-in. Jobmaster 6, standard on Series 60 models, or the maximum-duty Taskmaster V8 (optional, extra cost in Series 60). You'll find these to be the workingest, savingest heavy-duty V8's and 6's that ever pulled a payload—true truck engines with premium features galore, including exhaust valve rotators, hard-faced exhaust valves, forged steel crankshaft, standard oil bath air cleaner and oil filter and many more.

SMOOTH INDEPENDENT FRONT SUSPENSION IN EVERY MODEL

—Sure protection for your truck, load, driver and profits! Tough, friction-free Torsion Springs cushion the ride; rugged control arms guide each front wheel precisely for stable, responsive handling; wear-resistant shock absorbers absorb road shock and provide better wheel control. You get a smoother, safer ride that lengthens truck life—and reduces maintenance, cargo damage and driver fatigue. It's more evidence that you'll find the *choicest* equipment (in the widest choice) when you see your dealer about a '61 Chevrolet medium-duty truck. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

1961 CHEVROLET STURDI-BILT TRUCKS



■ *Report to fleet operators from B.F. Goodrich*



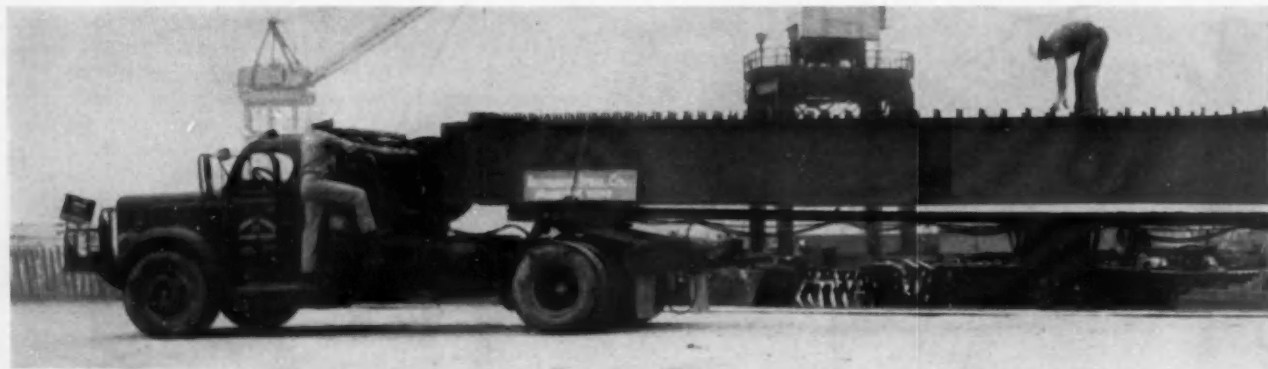
No ordinary tires could stand this

But B.F. Goodrich tires take it—day in and day out—to keep massive oil well "draw works" on the move

WHEN the "draw works" (machinery that powers a drilling rig) is loaded onto a truck, 50 tons crush down on the rear tires. This squeeze forces the cab as much as 6 feet into the air. As the load is drawn forward, the driver rides his truck back to earth, then starts his tortuous

trip across access roads made of oak boards nailed together with 60-penny spikes.

No ordinary tires could stand up under such constant battering—so Union City Transfer tried B.F. Goodrich. The Flex-Rite nylon cords in BFG Power Express tires withstand double the impact of ordinary cord materials, and, equally important in this work, they resist flex breaks. Because of this special BFG construction, Power Express tires give 2 or more years' service, then can still be retreaded.



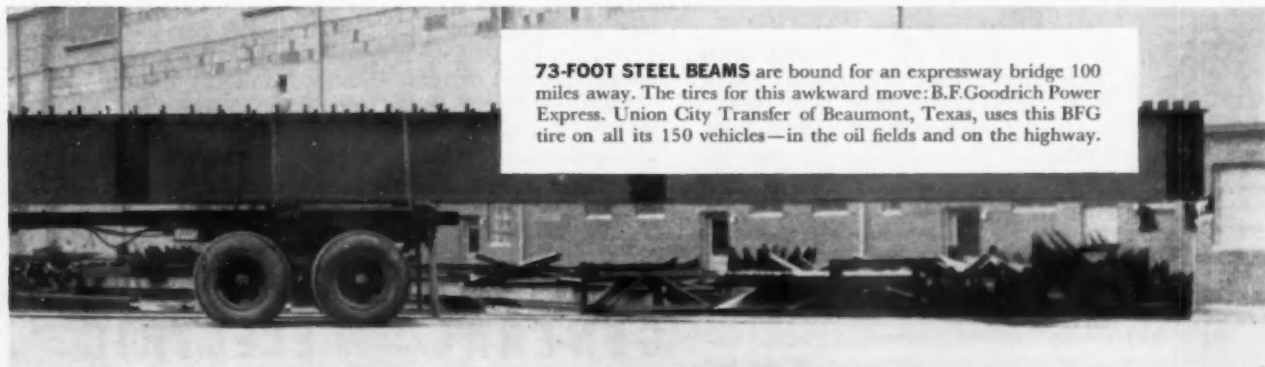


50-ton squeeze

Moving oil rigs in Texas is just one transportation problem B.F. Goodrich helps solve. BFG tires haul rocket fuel to Florida, missiles across the country, freight around the county. Your B.F. Goodrich dealer has the right tire for every moving job (including the "100,000-mile" Traction Express) and the service facilities to bring you added savings. You'll find your BFG dealer listed under Tires in the Yellow Pages. See him today. *The B.F. Goodrich Company, Akron 18, Ohio.*



Specify B.F. Goodrich Tubeless or tube-type tires when ordering new trucks or trailers

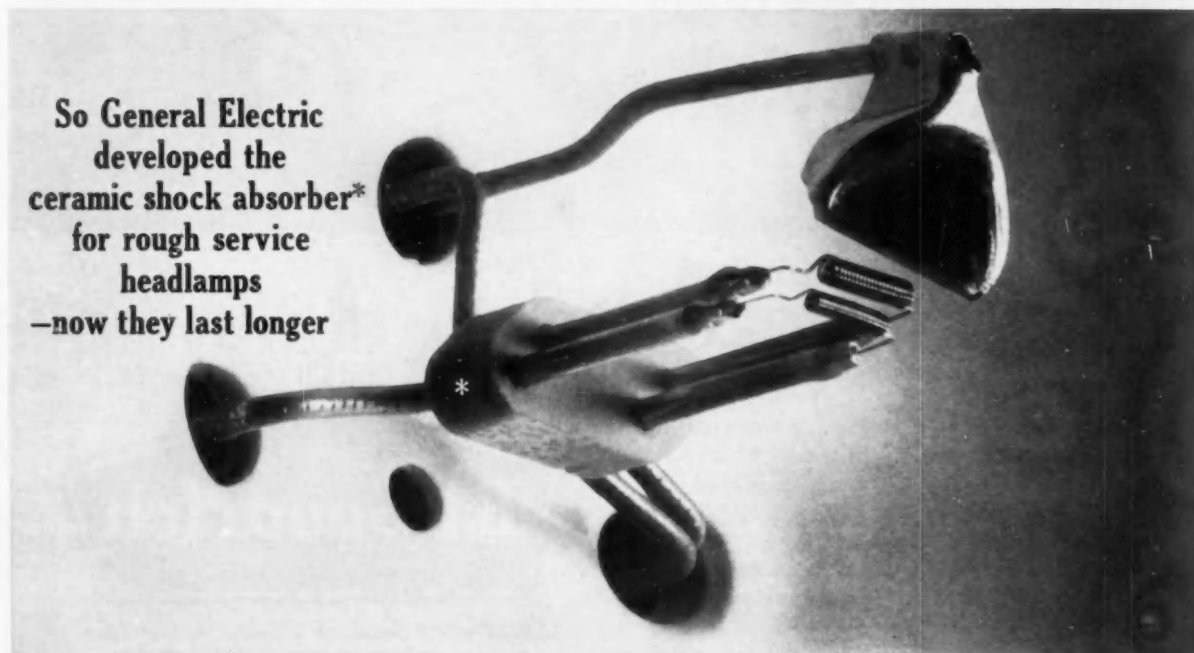


73-FOOT STEEL BEAMS are bound for an expressway bridge 100 miles away. The tires for this awkward move: B.F. Goodrich Power Express. Union City Transfer of Beaumont, Texas, uses this BFG tire on all its 150 vehicles—in the oil fields and on the highway.

**Truck
headlamp filaments
vibrating like this
fail sooner**



**So General Electric
developed the
ceramic shock absorber*
for rough service
headlamps
—now they last longer**



Enlarged but unretouched photographs



These photographs show why the filaments in the new General Electric truck lamp (bottom photo) will last longer than those in old style lamps (top photo). Although both lamps are being subjected to the same vibration in this test, the ceramic shock absorber in the new G-E lamp holds the lead wires steady. Much

less road shock and engine vibration are transmitted to the filaments, so they last longer.

The ceramic shock absorber is not the only thing General Electric does to make rough service headlamps for heavy duty trucks last longer. General Electric filaments are stronger to begin with because they are low

temperature filaments. And G.E. is the only manufacturer to put the filament shield on a separate rod so that its vibrations aren't transmitted to the filaments.

Make sure your trucks are equipped with General Electric Rough Service headlamps. (#4005 for trucks with 4 headlamps or #6013 for trucks with 2 headlamps). General Electric Co., Miniature Lamp Dept. M-123, Nela Park, Cleveland 12, Ohio.

Progress Is Our Most Important Product

GENERAL  ELECTRIC

CONSTRUCTION FLEET MAINTENANCE



COMPILED by the EDITORS of COMMERCIAL CAR JOURNAL

AT YOUR SERVICE . . .

When should you hand lap valves?

With the advent of precision machine grinding of engine valves and seats, hand lapping went out of style—or did it? Engineers say a small amount of hand lapping may make the difference between a routine job and a good job. Machine grinding often deteriorates as the machine wears and the wheels need truing.

After machine grinding, for the best and longest lasting fit, apply medium or fine grinding compound sparingly around entire valve seat, slip a light-fitting spring over the stem, lubricate stem, and drop valve into its original place. The spring should barely hold the valve off its seat. Place the grinding tool in the two holes or slot in the head of the valve, press down until valve is seated, turn valve a quarter turn first in one direction, then the other, three or four times.

Release pressure on valve, and little spring will lift it off its seat, turn valve 10 or 15 deg to another position and repeat. Do this until all compound is rubbed off valve seat.

Clean and inspect mating surfaces under a good light. A properly lapped valve will show a gray, frosty seating surface located either in the center of valve face or somewhere toward head end. The lapped surface will not be a true line like the machine ground surface, nor a sharp even line of contact.

When reinstalling the oil pan on

Waukesha diesels, a mechanic may be dismayed to discover two long bolts extending downward through flywheel housing at the rear flange which do not seat. Heads of these capscrews remain above the flywheel housing. They are not supposed to seat. Any attempt to make them seat will result in stripped threads.

These bolts are meant to provide full pressure at the pan gasket. Were they to seat, pressure would be lacking at pan gasket. This design was devised to give adequate oil pan gasket pressure, and at the same time make the bolts accessible. Incidentally, when they were removed they didn't seat if properly installed. But some field mechanics on inspection have come to the erroneous conclusion that the bolts with heads sticking up slightly were loose.

When should the rubber lip of

an oil seal be installed pointing away from the lubricant, so it can leak slightly? Before you answer "Never" remember the construction maintenance industry is full of contradictions.

Almost all seals for anti-friction bearings on gravel and rock plants are installed with the seal lip outward. Average pressure-type seal consists of a case, a spring retainer and a synthetic rubber ring. The outer case is pressed into the bearing housing, the synthetic contact material is held against the shaft with a given pressure by the spring ring. If the toe of the rubber lip is pointed inward toward the lubricant, the pressure of the lubricant aids the pressure of the spring to increase sealing pressure. This is the recommended method on many installations.

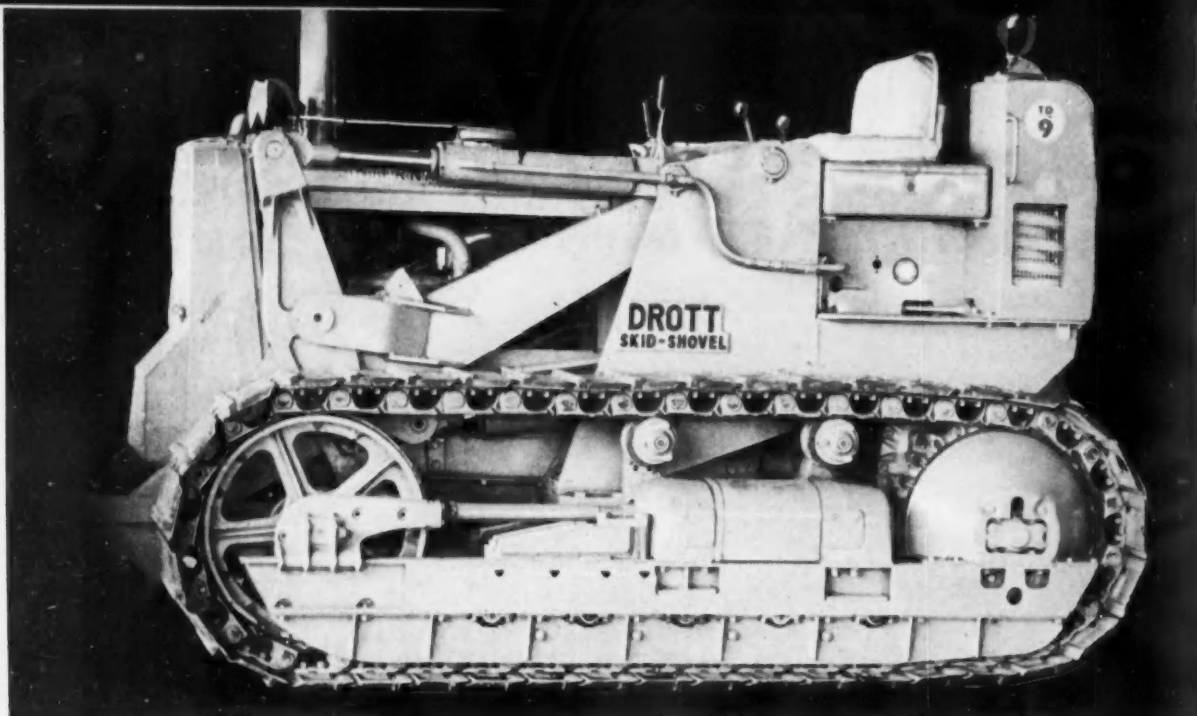
If installed with the toe outward, pressure of the lubricant has a tendency to escape more easily, but makes it harder for dirt to get into the bearings. That's why this installation is recommended in dusty rock plant operations. It's good business to keep dirt out, even if there is a slight oil seep. Be sure to follow the equipment manufacturer's directions. On any given rock plant, *not all* seals are installed with the lip outward.

Cylinder liner finish on

G.M. diesels aids in proper ring seating after an engine overhaul. The inside finish on new liners is closely controlled at manufacture to give proper ring seating. When overhauling an engine, be careful not to disturb this finish, as it will greatly affect ring seating.

Fan belt adjustment on the

Cummins NRT0-6-BI diesel used on late-model Model B Turnapulls is tricky. First remove cotter pin and loosen large castellated nut at rear of fan spindle shaft. Back out adjusting screw to tighten belts or turn in screw to loosen belts. Recommended tension allows about 3/4-in. movement downward with normal thumb pressure. After proper tension is obtained, tighten castellated nut and replace cotter pin. Both fan belts must be replaced when damaged or badly worn. Never replace one belt. Fan bearing should be lubricated every 500 hours with a good grade, short fiber grease. Do not over-lubricate. Always remove grease fitting and replace solid plug after lubrication.



New model TD-9 International with Drott front-end (not shown) was on display at Missouri-Illinois Tractor Co. near St. Louis where these photos were taken. Track

links are interlocking and Tocco-hardened around perimeter to give longer wear. Inner portions are flexible to absorb shock. Counterbored links help keep dirt out

Service Highlights of the IHC TD-9

Blowout-proof seals in top track idlers, 500-hour lube interval and a 3-point track suspension system are just a few of the features which cut service costs

This is a new feature highlighting service and maintenance requirements of new equipment. Use it to help evaluate maintenance advantages of different makes and models of recently-introduced equipment.

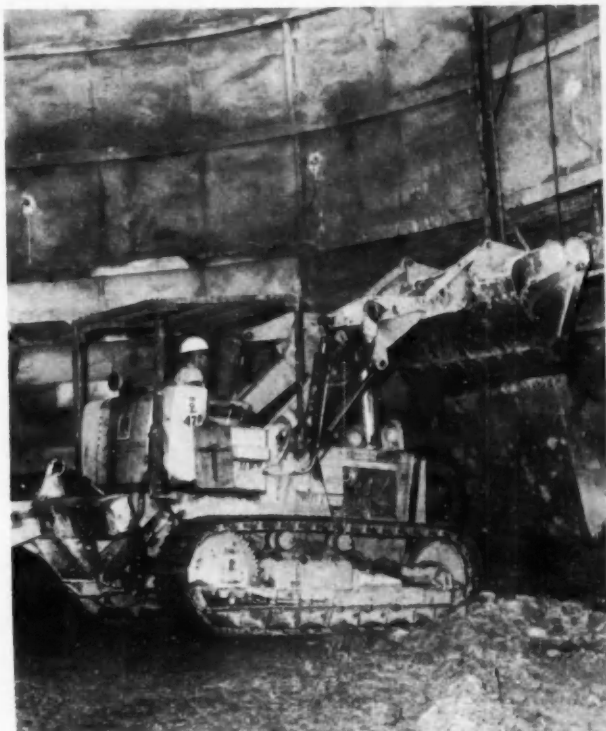
L. H. Houck, one of CCJ's best-known construction maintenance field editors, checked and photographed the new features of the TD-9 at an International Harvester equipment dealer near St. Louis. Then, while in Abilene, Tex., he checked on one working in unusually tough conditions 180 ft underground (see photo on facing page).

We'd like to have your comments and suggestions on this "Service Highlights" feature. Just use the free reply card to the editors which is inside the back cover.

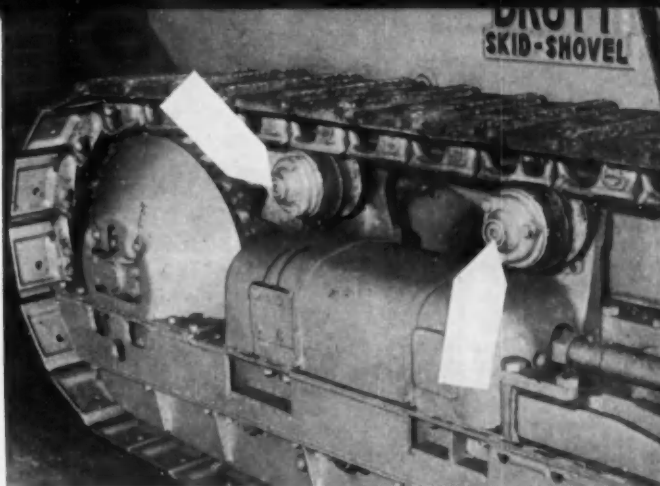
INTERNATIONAL's new TD-9 crawler has a new 66 net hp diesel engine, the IHC turbocharged DT-282. It features: push-button, direct starting; International single orifice pre-cup injectors; glow plug in each pre-cup for heating fuel-air mixture for cold weather starts; simple injection pump; and an engine oil cooler.

Engine has 282 cu in. displacement and turns out its rated hp at 1700 rpm. Compression ratio is 18 to 1. It burns No. 2 fuel, has replaceable dry-type sleeves, dished top aluminum pistons and positive valve rotators.

Pre-combustion chamber design



TD-9 is used here to muck out shot rock in 180-ft deep Atlas missile silo under construction by Zachry-Brown Construction Co. near Abilene, Tex. Ripper and Drott 4-in-1 front-end make good team for tough work and tight turns



New rollers have 300 per cent more lube capacity, extend lube interval to 500 hours. Rollers are vented to let trapped air escape and prevent seals from blowing. To lube, first remove the plugs shown by arrows above

Front track roller (below) has vented shaft to allow excess lube to run out. There's no risk of blowing seal with either hand or power lube equipment. Special lube nozzle, snapped into grease gun, comes with each TD-9



By L. H. Houck

permits use of low pressure injection nozzles. Turbocharger is lubricated and cooled by filtered engine oil directly from the engine's lube system. The 12-volt direct push-button start system uses two 6-volt batteries in series to supply current for starter and six glow plugs.

Injection pump can be serviced on the job. It features a single cylinder with opposed cam-operated plungers. Flow of diesel fuel oil lubricates parts in pump. No independent lubrication is required. Fuel flowing through housing absorbs heat, then returns to fuel tank through a return line. A sensitive governor controls quantity

used by metering valve and passed to injection nozzles.

Steering controls have boosters which reduce lever pull and increase maneuverability. Steering brakes and clutches are easily adjusted and can be removed independently.

Undercarriage components are new. TD-9 track chains are drop-forged, heat-treated, steel links held together by bushings and pins. Links are counter-bored to form a labyrinth seal to keep out dirt.

The TD-9 has 3-point track suspension as compared to 2-point for most crawlers. Track frames are mounted on each end of a pivot

shaft by a ball and socket joint. Frames maintain vertical alignment by steel diagonal arms that are connected to pivot shaft by special bearings. Front guide roller and brackets keep tracks from toeing in or out. Loads that build up progressively during short pivot turns are immediately checked by front guide rollers. This prevents shock loads from reaching final drive gears.

New TD-9 track rollers have new face-type seals to keep dirt out. Seal assemblies compensate for end play automatically through bellows-type construction. They require no take-up, can be replaced easily.



Service Can Boost Your Profits

PM programs and records, lube recommendations and applications, and good housekeeping—they're all profit-boosting services offered by oil suppliers

V DO YOU KNOW that most equipment dealers, tire companies and fuel and lube suppliers offer free services to you their fleet customers? If you're not using any of these, you might be overlooking a good way to cut your maintenance costs.

Each of these suppliers can help you set up an efficient program which will not only cut your repair costs but will reduce downtime and keep your equipment on the job.

At the recent Earthmoving Industry Conference in Peoria, Ill., sponsored by the Central Illinois Section of the Society of Automotive Engineers, H. G. Rudolph, Jr., of Socony Mobil Oil Co., Inc., explained the profit-boosting services available from most fuel and lube suppliers to their construction fleet customers. Highlights of his speech are reported here by **COMMERCIAL CAR JOURNAL** to help you in the struggle to cut maintenance costs.

There are many services offered by petroleum suppliers—at no charge to their customers. They pertain to good housekeeping, recommendation and application of lubricants, and preventive maintenance. Each service, when put into practice, can be a cost saving and add to the profits of a given operation.

It is a fair statement that all petroleum suppliers make every effort to furnish clean, uncontaminated products made to exacting standards and packaged in clean containers. However, there's a situation found too often in the field. It's poor housekeeping. Because of poor storage arrangements, the product is contaminated by improper handling. Often it is dispensed into engines, gear cases, and hydraulic systems with dirty dispensing containers. Grease guns may be re-packed with dirty paddles, adding contamination to the product. You can't afford either dirt or this costly method of filling guns.

As an engineering service, your oil supplier's local field engineer can suggest many storage arrangements which are neat from an appearance standpoint and minimize the possibility of contaminants entering the product.

It is most important that clean, efficient equipment be used for dispensing products. A good example is the use of a gun-filler pump. This should be installed,

with cover, on a grease drum immediately after it is opened. Guns can be loaded quickly and easily, and there is little danger of dirt getting into grease. Another way to do this is to use grease in cartridges which can be inserted directly into the guns.

When you buy a new piece of equipment there are manuals available which contain specific lube instructions for the unit. However, if all these individual recommendations were followed, the total number of lubricants required on a job might be large enough to be very confusing.

Of course you'd like to reduce as far as possible the number of lubricants necessary to satisfy lube requirements. Several significant savings result:

1. Products can be bought in the largest package size, at a cost saving.
2. There is less possibility of error in applying products.
3. Inventory records are simplified and there is less paper work in general.
4. Contamination is reduced, with fewer packages to be opened.

Products such as multi-viscosity engine oils, multi-purpose gear lubricants and multi-purpose greases help accomplish these savings. It would be very desirable as an ultimate objective, to have one engine oil, one multi-viscosity gear lubricant, and one multi-purpose grease to satisfy lubrication requirements for all equipment. So far, there are very few fleets using only three products. In most cases, many more are used.

To reduce this number, yet assure proper lubrication, is a job for the petroleum supplier's field engineer. This man's expert services are needed because today's lubricants are complex in nature in order to satisfy the jobs they are called upon to do.

A perfect example of improper lubrication is the case where the lube crew didn't use an open gear lubricant to grease a pinion gear on a 1½-yd shovel. Instead, they lubricated the gear frequently with a multi-purpose grease. This grease is excellent for many purposes, but is not designed to lubricate open gears. As a result, the gear failed and cost the contractor several thousand dollars to rebuild

the unit. Let the oil supplier's field engineer recommend the lubricant. He is a specialist in this field.

Another important area in which the oil supplier can serve you is in determining the most economical oil drain intervals. Start with the intervals (hours of operation) recommended by the equipment builder. Then, by using oil analysis and studying equipment and operating conditions, it is possible to establish the optimum drain intervals. In this way, you can make substantial savings in lubricant and application costs . . . and through increased availability of equipment. Over-extending drain intervals can result in more frequent overhauls, which might prove very costly.

The third major area where the fuel and lube supplier can help is in preventive maintenance. It is a proven fact that the more time spent on PM, the less time and money are required for parts and labor to keep equipment in operation. A modification of the old adage applies: "An ounce of maintenance saves a pound of repair."

PM systems come in many forms, but it is necessary for the system to include four aims:

- It must be simple.
- It must be based on regular inspection.
- It must give full case histories.
- It must provide for immediate communication and action.

A system composed of the following five pieces (pictured below) would accomplish these aims.

1. A record folder for a complete history of each individual unit.
2. A lubrication chart, telling what to lubricate, what with, and when.
3. A weekly service and inspection report to tell what needs fixing and when the work has been done.
4. A delivery ticket for recording consumption of fuel, engine oil, gear lubricant, and grease.
5. An operator's squawk sheet for reporting trouble that needs attention between inspections.

The entire preventive maintenance system is based on the premise that lubrication time is inspection time. A detailed chart for each piece of equipment is needed to eliminate guesswork as to

what to lubricate, what with, or when. The lube man is the key. He is the first line of defense against equipment downtime, lost man-hours, and possibly overtime. He inspects during lubrication time because it is the ideal and least expensive opportunity for this key PM function.

However, effective PM must also provide for those occasions when mechanical failures are detected by the operator between regularly scheduled inspections. If he can notify the maintenance department quickly, the equipment can be repaired in the field and a costly breakdown avoided.

The operator's squawk sheet (also shown in the illustration below) is a feature that differs from most PM systems. It gives him a means for *requesting* the needed maintenance.

There are two excellent reasons why a workable preventive maintenance system can add to profits. First, maintenance and repair costs generally divide one third for parts, one third for labor, one sixth for tools to do the maintenance and repair work, and one sixth for petroleum supplies. This is based on national average. Notice that the repair parts and labor are the expensive items. A good PM system can help reduce the dollar and time cost for parts and labor. Second, by using good PM techniques, you can meet work schedules by keeping equipment available for its purpose.

The next step is to use correct petroleum products, delivered to equipment in clean condition. To complete the picture, keep maintenance cost figures on equipment to identify troublesome units and analyze their performance as a guide for future purchases.

Such an essentially simple program will help save many dollars in labor, replacement parts and downtime costs. It will also help to meet or beat the job schedule and avoid any penalty payments. Since maintenance expenses are also reflected in bids, good PM can help put your company in a better competitive position at the next letting.

However, the true measure of PM effectiveness comes in the final and most important analysis: increased profits. The petroleum industry, through engineering service, can help you achieve these many benefits.

The illustration shows five overlapping forms used in a preventive maintenance system:

- OPERATOR'S SQUAWK SHEET:** A form for reporting equipment issues. It includes fields for Equipment No., Date, Shift No., and a section for "NEEDS ATTENTION" with a list of parts to check: Leaks - Engine Oil, Hydraulic Fluid, Fuel, Water, Excessive Exhaust Smoking, Low Engine RPM, Oil Pressure, Temperature, Water Temperature, Converter Fluid Temperature, Air Pressure, Controls, Cable Assemblies, and Brake System.
- EQUIPMENT MAINTENANCE CONTROL CHART:** A chart for tracking maintenance over time, featuring a diagram of a crane and a grid for recording maintenance events.
- LUBRICATION RECOMMENDATIONS:** A chart for tracking lubrication over time, featuring a diagram of a truck and a grid for recording lubrication events.
- DELIVERY TICKET:** A form for recording the consumption of fuel, engine oil, gear lubricant, and grease.
- WEEKLY SERVICE & PM REPORT:** A form for reporting weekly service and preventive maintenance, including a section for "WEEKLY SERVICE & PM REPORT" and a grid for recording service events.

Handle Tracks with One Man?

**Dean Machinery Co. does it faster
and cheaper with its shop-modified
Liftcarriers . . . By Bill Palmer**

HANDLING CRAWLER TRACKS is not only awkward but it's expensive. If you throw a track, or break one on the job, it generally means unexpected downtime in addition to the expense of fixing it. Naturally, you always try to schedule track work while the equipment is in or near the shop—not out in the boondocks. But it doesn't always happen that way, does it?

Dean Machinery Co., a Caterpillar equipment dealer in Kansas City, Mo., decided to make track handling a one-man job. As an equipment dealer, the company has plenty of service calls for track work—but it had always been a time-consuming and expensive job. A minimum of two men were required for all recovery work.

Dean's answer to the problem: The Liftcarrier. Dean has built two. They're working out so well that the company is now remodeling more of them for other dealers as well as construction fleets with large enough operations to use them.

The Liftcarrier is converted from an old Model M-II-A Treadway Army truck, equipped with hydraulic crane. The Dean units are mounted on Ford C-600 chassis. Original 153-in. wheelbases were extended and fish-plated an extra 30 in. The beds are 18½ ft long. Lifting capacity is 10,000 lb.

One of Dean's modifications was to shrink the width to legal road limits. About 2½ in. were taken out of the center of the bed. Another inch was gained by reversing some large bolts.

Additional controls for the hydraulic crane were installed at the rear. Jacklegs were also added to allow a longer reach with heavy loads. These are cantilevered to the bases of the boom arms. When the boom swings out beyond the rear of the truck, the jacklegs automatically lower into position. They return automatically when the boom swings back.



Dean's Liftcarrier permits one driver to go out alone in the field, load a pair of tracks and bring them back to the shop. Unit can lift 10,000 lb., has 12-ft reach. Hook-to-ground clearance is 12½ ft. Controls are at rear for both boom and chain hoist. In retracted position, boom folds down on top of body, doesn't interfere with load. Dean also makes them for dealers and fleets.



Boom has a 12-ft reach, is hydraulically powered. This could result in almost a free fall when unloading, so the arms were cushioned with shock absorbers. These are pistons that resist the fall of the boom arms—the same way a door check smothers a slamming door.

The Liftcarrier pictured here has a chain hoist on a trolley riding on an I-beam between the boom arm tips. Transversing, lifting and lowering are all controlled by the operator standing near the rear of the truck.

The Liftcarrier also gets used on many other smaller jobs—such as carrying dozer blades, rippers, clamshells, and earthmover tires.



V MILANO CONSTRUCTION CO., Erie, Pa., recently put a semi-automatic welding machine on the job in its shop. Long an advocate of electric arc welding with rod, the company decided to give the new wire-fed 200-amp DC semi-automatic a try at hard-surfacing as well as routine welding.

"This is a continuous duty welder with high output," says Ralph Lewis, maintenance chief. "We can push out about 50 lb of 7/64-in. manganese (218) wire in hard-surfacing welding in about 60 minutes. Try to get that much rod out of a man in an 8-hour day!"

Now the company is considering adding positioning equipment which will make maintenance welding even faster. As it is now, Lewis says the semi-automatic is paying off—even on routine jobs. It does the work so much faster, the cost per hour is way down.

Photos above show the new semi-automatic at work, and having a new reel of wire put in. Photos below show two typical repair and hard-surfacing jobs where the semi-automatic is paying off.

How to Cut your Welding Costs

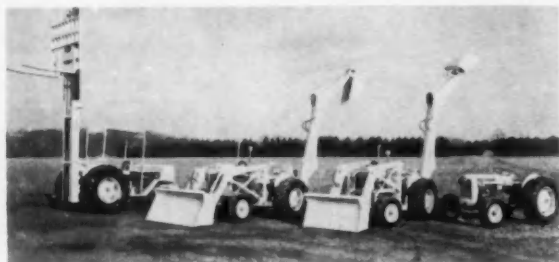
For hard-surfacing work, shop learns that semi-automatic welder does in an hour what used to take a day





IN CONSTRUCTION EQUIPMENT

USE FREE REPLY CARD INSIDE
BACK COVER TO GET MORE DETAILS

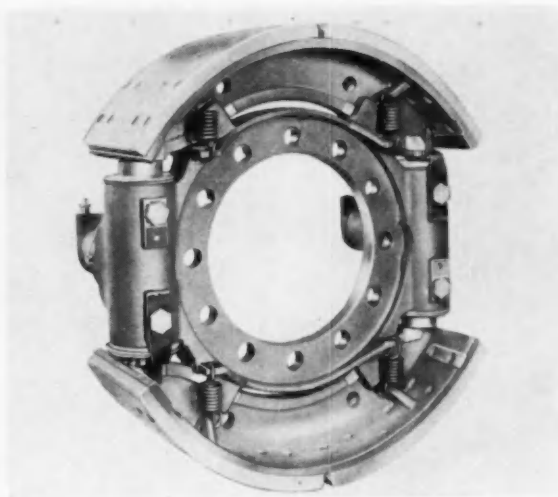


Ford's Tractor and Implement Div. has introduced a new 2000 and 4000 series of industrial tractors. Typical models include the 4000 heavy-duty forklift, 4040 tractor with 2500 lb front-end loader and 12 ft backhoe, 4000 tractor with loader and backhoe, and the 2000 series tractor. For full information, circle 355.

Portable heat treating unit from Electric Arc, Inc., Newark, N. J., will stress relieve pipe weld in 2 to 14 in. OD pipe with wall thicknesses to 2 in. at temperatures to 1375 deg F. Unit is the 80 KVA Smith-Dolan Model BHDRS equipped for both induction and resistance heating. Circle 357 for free information.

To find out what else is new in fleet equipment
check the "What's New" index on page 2

Newest entry in the big tractor class is R. G. LeTourneau's Series K-104 Pacemaker Electric Power-Dozer. It has two 420 hp diesels feeding power to the four "A" size Electric Wheels—the most powerful in the line. Measured drawbar pull is 90,000 lb at 2 mph. For more information on this giant, circle 358 on the reply card.



Rockwell-Standard Stopmaster brake is now offered in sizes for earthmoving and off-highway equipment. Sizes go from 17 to 26 in. diameters in 4 to 10 in. widths. Balanced design gives equal braking effort to both shoes. Brake has no lube requirements, is offered optionally with automatic adjustment. Circle 356 to get more facts.



International recently announced its TD-20 (201 series) crawler—second largest in the line. It has the turbo-charged DT-691 diesel giving 140 engine hp at 1550 rpm. Drawbar hp is 113. A new six-speed full-reverse transmission is standard. A bigger radiator eliminates auxiliary tank. Circle 359 for further details.



Signs of Extra Profits



The plugs that adapt to every driving condition

ROBERT BOSCH

thermo-elastic

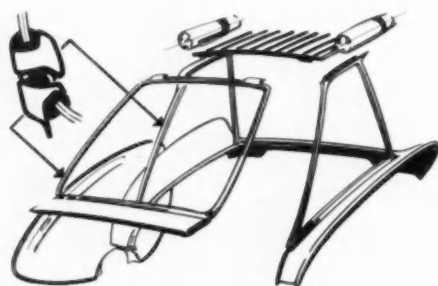
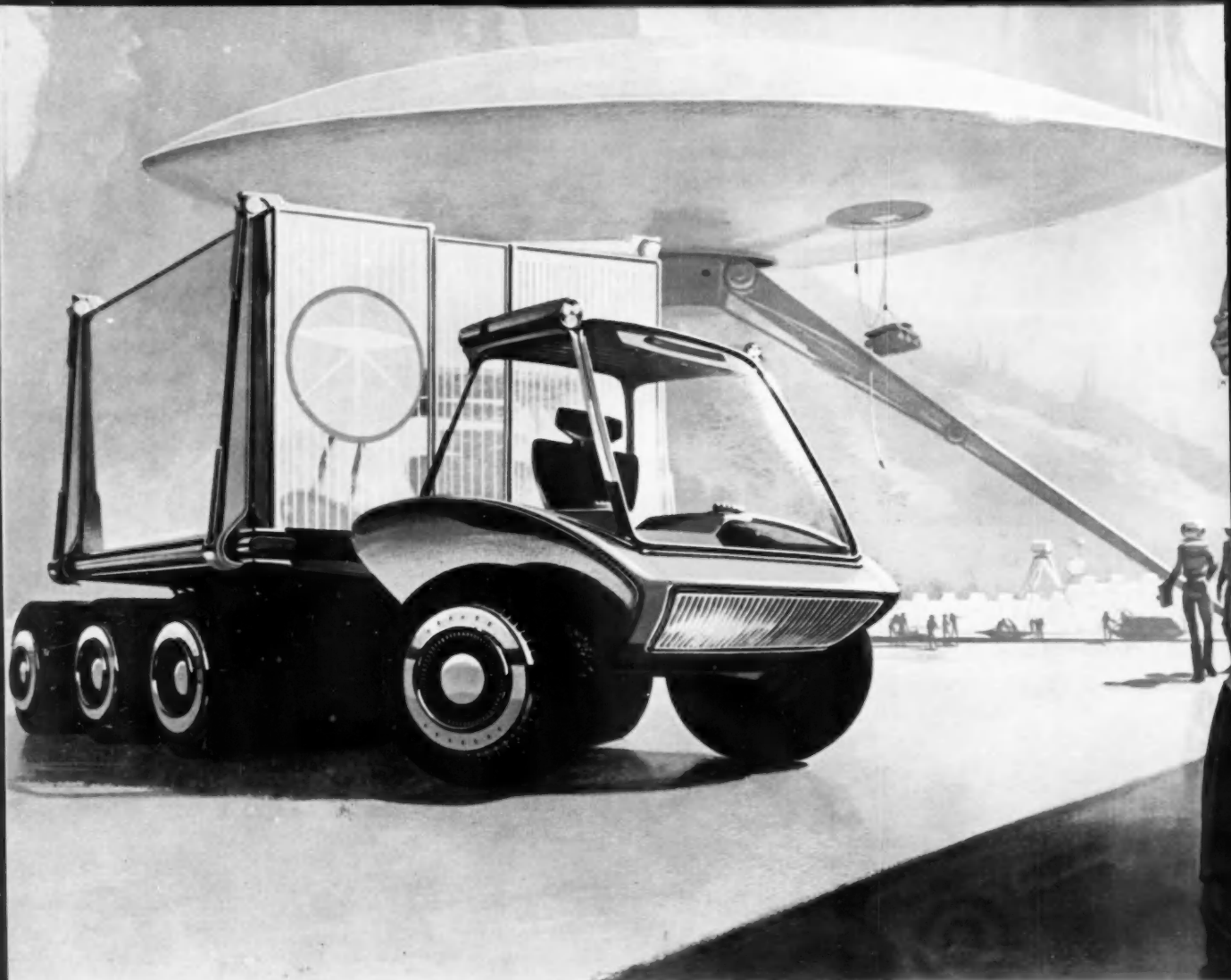
SPARK PLUGS

Adaptability to the driving condition of the moment! It's yours in the thermo-elastic plug—the heavy duty performance plug that prevents pre-ignition, fouling, loss of power. Original equipment on best-selling imports. Ideal for all domestic applications as well.

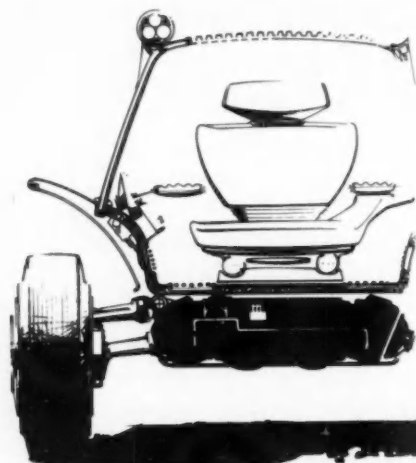
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The ROBERT BOSCH name also identifies the best in ignition, lighting and starting equipment, electric wipers, coils, horns, regulators, fuel injection systems and other fine products.



1.



2.

1. First problem: how to cut deadweight to a minimum and get maximum payload. The solution is USS High-Strength Low-Alloy Steel having a 50,000 psi minimum yield point, superior impact resistance, and improved atmospheric corrosion resistance over that of carbon steel. By designing the body panels in thin gage High Strength Steel sheets, weight is reduced as much as a third, and carrying capacity is increased. Another weight-saving idea: the use of lightweight, high strength steel tubing for pillars. Some of the high strength and high-strength low-alloy steels used in today's automobiles and trucks are COR-TEN, TRI-TEN, MAN-TEN and, of course, PAR-TEN.
2. Perforated Stainless Steel sandwich roof panel has sliding inner panel for draft-free ventilation. Stainless Steel used here and in capsule tanks means extra-long life because of its remarkable corrosion resistance and strength. Driver's contoured seat back is formed of a specially coated steel. This material combines the strength of steel with a beautifully colored surface so tough that it's practically abuse-proof.



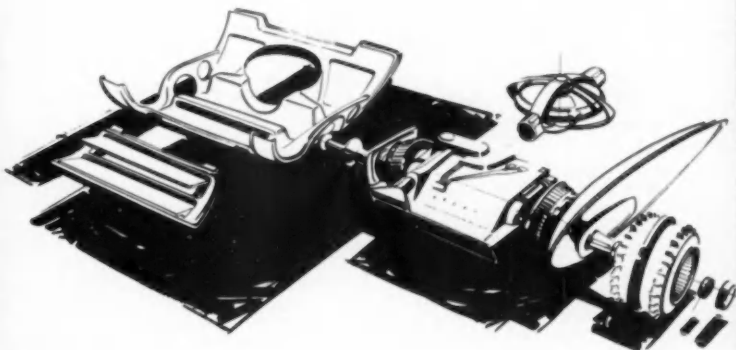
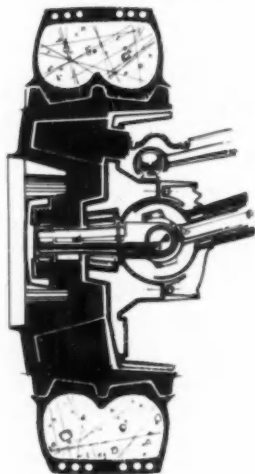
Idea for an explorer, in steel

It will take husky, never-say-die machines like this self-loading flat-bed carrier to explore the worlds of tomorrow. Shown below are a few imaginative examples of how today's USS Steels could keep this futuristic carrier on the go. Today, there are over 160 steels used in passenger cars and trucks, and **thousands** more available. There is a steel for practically any combination of properties the engineer can dream up . . . steels for strength, ruggedness, durability. When you want steels that will match your imagination, call United States Steel, Room 6291, 525 William Penn Place, Pittsburgh 30, Pennsylvania.

USS, COR-TEN, MAN-TEN, TRI-TEN and PAR-TEN are registered trademarks



United States Steel



3. Stainless Steel wire cord in the tires assures stability, cooling, and good wear. The tires are further impregnated with steel chips to improve traction and reduce wear. Spindles, shafts and similar parts are made of tough alloy steel that will take enormous stress without deforming.
4. Another important use of alloy steel is in the form of seamless tubing used in the bearing races to withstand high thrust loads. The non-magnetic properties of chrome-nickel Stainless Steel are required to make the gyro-stabilizer function properly. There's a special steel product chosen for its good traction properties — textured steel rolled on special rolls that give it non-skid characteristics. It's used for the formed steps leading down the clamshell manway.

Use strong, rugged steels for strong, rugged equipment.





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FOR TRUCKS BECAUSE
THEY'RE BUILT FOR TRUCKS!**



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REGIONAL REPRESENTATIVES: Chicago, R. A. Lennox • Detroit, Chas. F. Murray Sales Co. • Allentown, Pa., P. R. Weidner

New brake performance rating

After a year of intensive testing and study, a TTMA-AMA Joint Committee has developed and approved a Brake Horsepower Rating Formula. Here's what it is, where it stands now, and why it's important to you . . . By Ed Janicki

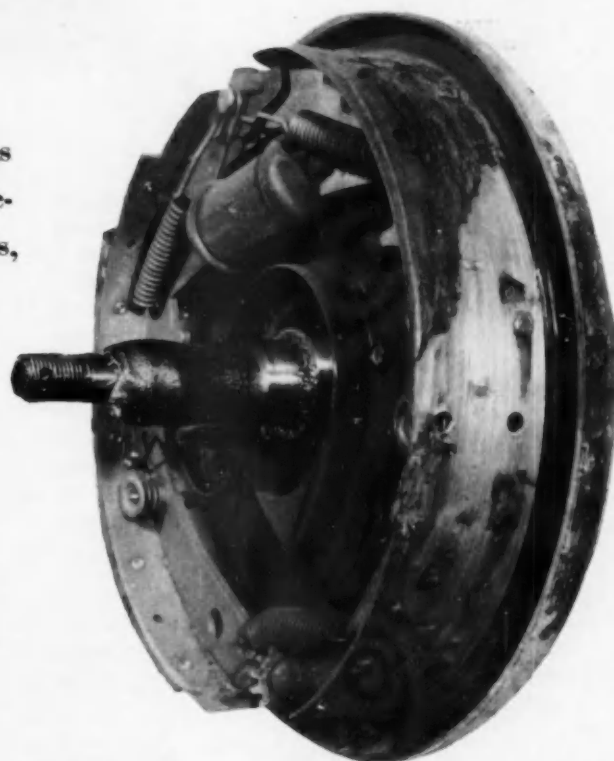
VONE OF THE most important reports governing your future operations is now in the hands of the Society of Automotive Engineers. It's part of a proposed code to determine gross vehicle weight for registration purposes. It will also help you in vehicle selection since it "pins down" GVW to a performance standard.

Proper title is the Brake Horsepower Rating Formula. It has nothing to do with engine brake horsepower—is strictly a means of measuring brake performance against any GVW.

The rating formula was developed by the Joint Technical Committee on Combination Vehicle Brakes representing the Automobile Manufacturers Assn. and the Truck-Trailer Manufacturers Assn. Test work is now complete and has been approved by the Motor Truck Committee of AMA. Recommendations are now before the Society of Automotive Engineers for approval and acceptance.

Main objective of the project was two-fold. (1) To develop a reliable method for obtaining brake rating horsepower of any given vehicle and (2) to determine the brake horsepower requirement per unit of GVW.

This brake performance rating is actually Part 4 of a proposed code to rate vehicle GVW by a specifically defined standard. There are three other parts to the project. These include



Rating brake performance without destroying linings was problem throughout tests. Here's one from a 1½-ton truck that wore right into the shoe

(1) a formula to check the horsepower that should be in a vehicle to maintain satisfactory speeds for a given GVW, (2) tests to rate load-carrying ability of components and (3) application factors for guidance of states wishing to use GVW ratings for licensing and operating controls.

The latest (Part 4) is the Brake Horsepower Rating Formula—the most significant and most exhaustive so far. The project started at a slow pace several years ago. Need for stepping up the program came when Pennsylvania in 1956

Brake rating

Continued

A three-axle Mack used in the tests carried 11,075 lb on front axle and 31,175 on tandem. GVW: 42,250 lb



passed legislation on truck engine-to-weight ratios and required a square inch of brake lining for every 55 lb GVW.

"The trouble with the Pennsylvania certification," notes one truck engineer, "is that Pennsylvania didn't stop at 55 lb per square inch. It put in perimeters, too, requiring that the lining arc must be at least 90 deg but no more than 120 deg long. The regulation made no allowance whatever for the use of retarders. Yet some retarders permit a driver to cross the entire state without ever touching the service brakes, except for stops from speeds under 20 mph."

Many states have been looking for better ways to prevent truck overloads in relation to engine power and brake fade. If GVW's continue to rise in the future, emphasis on brake and engine standards is certain to mount steadily.

The rating program itself

The brake rating program got into high gear last year. At its meeting in June, 1960, the AMA Motor Truck Committee directed the joint AMA-TTMA committee to appoint a task force to complete the program. The objective: A minimum brake performance rating which can be guaranteed by truck manufacturers.

Specifically the committee was asked to "develop a code for using the brake horsepower rating for vehicle registration purposes . . . to include a brake rating test procedure based on a series of snubbing applications (from 50 to 15 mph) for a fixed period of time (12 minutes) . . . ending with a stopping distance test within specified limits of the Uniform Vehicle Code."

Actual brake tests were conducted from August to November last year at Curtiss-Wright's test track at Utica, Mich. Six truck makers furnished vehicles and drivers. They included Chevrolet, Dodge, Ford, GMC, International Harvester, and Mack. Fruehauf and Trailmobile supplied the trailers.

Each truck was loaded to the manufacturer's recommended maximum GVW—using concrete blocks (see photos above). Brakes were burned according to SAE procedures. Then, each truck was accelerated to 50 mph and snubbed at 12 ft per second to 15 mph. During the tests, 23 vehicles were used ranging from 4510 to 32,000 lb GVW on two-axle trucks and to 43,000 lb on three-axle models. Single and tandem axle trailers ranged from 18,000 to 38,000 lb GVW. Trailer brakes were rated with maximum axle loads.

Eleven different hydraulic brakes were tested ranging from 11 x 1 3/4 in. servo type to 15 x 7 in. two-leading-shoe type. Nine full air brake sizes tested ranged from 15 x 3 in. and 16 x 2 1/4 in. front, to 15 x 7 in. and 16 1/2 x 7 in rear—in both single and double anchor types. Twenty-four different brake linings, from eight different manufacturers were used.

How much "brake" do you need?

The latest brake rating recommendations boil down to this. (1) Specific brake rating horsepower required for a vehicle with a given GVW. (2) Pounds of GVW allowed per brake rating horsepower. By plotting the figures on graphs, an engineer can see how much "brake" you need for any given weight.

In addition, the tests showed up several other interesting points. Says Paul Fisher of Chevrolet, chairman of the brake rating task



This GMC grossed out at 43,000 lb.
Front axle was loaded to 11,000 lb.
Tandem axles weighed out at 32,000

IHC tilt-cab, in midst of test run,
carried 9040 lb on front, 31,820 lb
on tandem for a GVW of 40,860 lb



Tandem trailer rigged as single unit
had 20,870 lb on rear axle, 9006 lb
on front for a gross of 29,876 lb

force: "During the tests, certain equivalent-size trucks had different size brakes. Some had 16½-in. diameter rear brakes while others had 15-in. brakes. Ratings come out approximately the same.

"From a design standpoint, the brake engineer can eventually make use of this rating. For example, if we find that a 16½ x 6 in. brake has a rating approximately equal to a 15 x 7 in. brake, then the engineer has a choice of selecting whichever brake fits the vehicle best—the large, narrow one or the small, wide one.

"Brake engineers feel strongly on this point: Lining area does not in itself mean anything as far as brake performance is concerned. You could have large brakes, brakes on every axle, and good drums. But if you have poor brake lining material, the end result is very, very poor. The lining itself has a lot to do with the safe operation of any vehicle."

Stopping distance requirements

The performance tests were conducted as scientifically as possible using instruments of all varieties to record the desired data. In addition, brake adequacy tests were made at the beginning of each run with the brakes cold, and at the end when they were hot, to find out if they met the stopping distance requirements of the Uniform Vehicle Code. In most cases, they agreed with, or were less than, the requirements.

Tests were designed to rate brake performance—not how long they would last. However, by the time the tests were completed, some linings were pretty well destroyed (see opening page).

Biggest problem, says Fisher, was to rate

brakes in a reliable manner without doing any permanent damage to the linings themselves. "We can run a test to find out what the brakes will do. But they must remain useable and reliable after the test is completed. This was the biggest single problem of all we faced all through the program."

Approval due in June

Where does the brake performance rating program stand now? As already mentioned, it has been approved by the Motor Truck Committee of AMA and has been turned over to SAE for approval.

SAE tells *COMMERCIAL CAR JOURNAL* the proposal is now under study by a technical committee. It's tentatively scheduled for action by the SAE at its Summer Meeting on June 8th.

If approved, truck makers will be able to

(TURN TO PAGE 162, PLEASE)

Navy tests palletized trailer loader

Evaluation shows 'Moto-Vator' can cut loading and unloading times, even if operated by unskilled men

▼ A TRUCK PALLET LOADER called "Moto-Vator" was recently tested by the Navy. Results indicate it can "significantly reduce loading and unloading time, and manpower requirements."

"Moto-Vator" is a product of H. S. Watson Co., Emeryville, Calif., and Toledo, Ohio. The Navy evaluated the unit at the Supply Research and Development Facility, Naval Supply Center, Bayonne, N. J. Navy test results, however, are not a commercial endorsement.

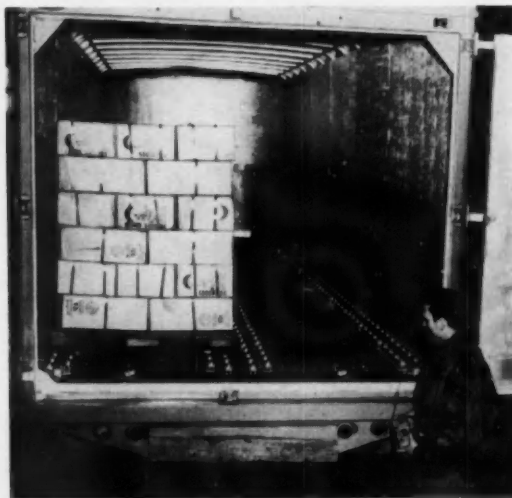
In simplest terms, the device moves pallets or loose cargo into the trailer over roller tracks. Power comes from battery-powered reversible motors mounted under the trailer. It is controlled by a remote unit with two or four buttons, according to the complexity of the loader used. The remote plugs into the rear of the trailer.

Pallets are placed on aluminum supports which move on roller tracks into the trailer. They are pulled by either of two endless chains installed on outside edges of the trailer floor.

Unpalletized cargoes can be loaded on trailer-width movable floor segments similar to the pallet-support arrangement for pallet loads. These segments have self-contained wheels and a cleat at the center which catches the floor-mounted chain.

When not under power, supports and floors are held stationary by the drive chain.

On two-conveyor models for palletized loads, each may be operated independently.



Pallet rides into trailer on pallet supports. Operation is controlled by driver using four-button remote unit which plugs into rear of the trailer

The Navy used a 28-ft semi-trailer for its test. The "Moto-Vator" model used had two conveyors and two motors. Tests showed a square-nosed trailer worked best.

Here are the Navy's findings:

The "Moto-Vator" is basically a very simple piece of equipment and can be easily operated by unskilled personnel.

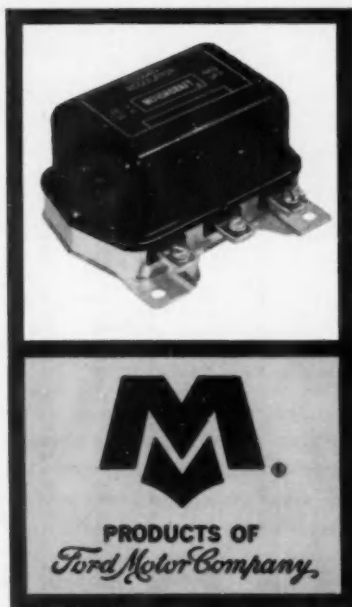
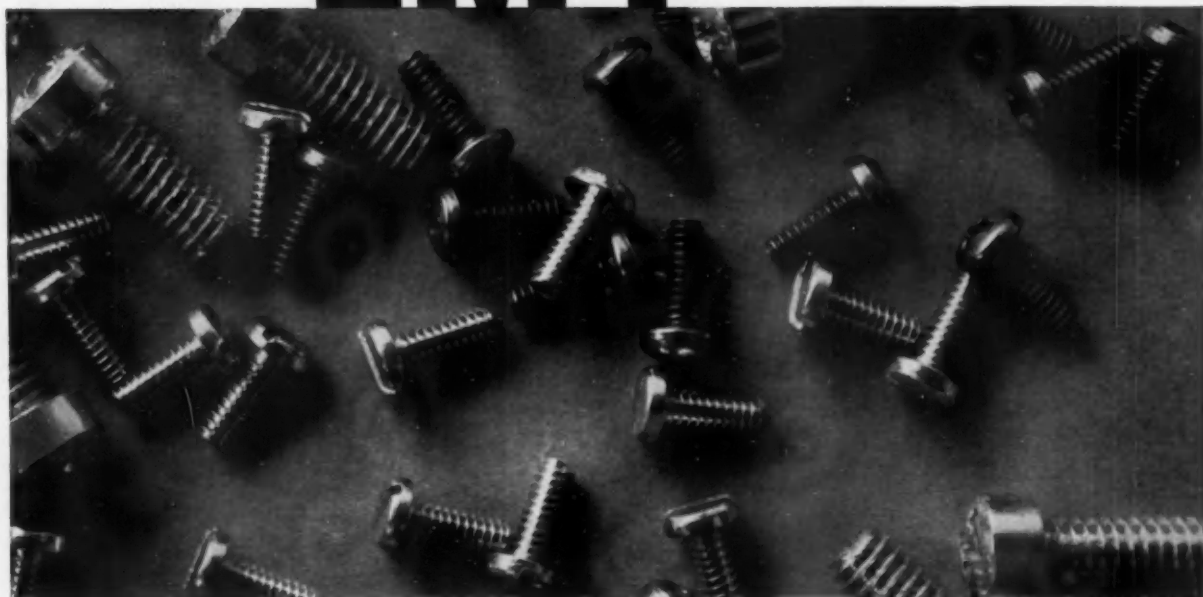
A routine preventive maintenance program was found adequate for minor chain adjustments and lubrication of chains and gear assemblies.

In field tests, loading and unloading was reduced from two hours (with two men working in the trailer) to 30 min with no one in the trailer.

"Moto-Vator" provided a savings of approximately 10 man hours per trip.

Watson says the devices can be installed in any new or in-use truck or trailer.

WHO NEEDS 'EM?



We don't! They're adjustment screws used in many voltage regulators—and after a period of time, road shock and engine vibration may work them loose until factory calibration is changed. The result in many instances: a worn-out generator!

MOTORCRAFT regulators are calibrated by adjusting a metal arm. The position of this arm determines the point at which the contacts close. Thus, factory calibration remains the same . . . no matter how long the regulator is subjected to vibration.

And for long, corrosion-resistant life, MOTORCRAFT voltage regulators have an exclusive heavy cadmium plating which is applied to all steel parts.

Quality design and engineering like this is typical of all the parts in the fast-moving MOTORCRAFT line.

SERVICE PARTS BY MOTORCRAFT

cover a wide range for electrical, ignition and carburetor tune-up and repair jobs, and are available at leading parts suppliers everywhere. To keep Ford-built vehicles performing at their best . . . use the highest quality replacement parts available! MOTORCRAFT parts are built to back up your best work!

QUALITY-BUILT TO PERFORM BETTER....LONGER

1961 New Truck Registrations*

STATE	Brookway	Chevrolet	Diamond T	Divco	Dodge	Ford	F.W.D.	G.M.C.	International	Kenworth	Mack	Peterbilt	Studebaker	Volkswagen	White	Willlys Jeep	Willlys Truck	All Others	Total
Ala.	Feb.	515	4		44	444		128	154		15		5	56	15	4			1,387
Ala.	2 Mos.	986	6	2	73	806		227	258		20	20	8	102	26	11	3		2,556
Ariz.	Feb.	25			2	19		16	2		1		2	1		1			70
Ariz.	2 Mos.	46			4	28		16	2		1		2	1		1			102
Ark.	Feb.	208			36	193		112	121		3		3	3		1			541
Ark.	2 Mos.	542		1	88	468	2	98	81	7	3		7	38	5	8	11	2	1,387
Calif.	Feb.	602	1		39	560		112	121		6		7	19	20	6			1,475
Calif.	2 Mos.	1224	6	10	86	1063		251	224	2	7		12	27	1	13	6		2,817
Calif.	2 Mos.	2290	18	19	360	2553	1	443	471	11	10	8	34	279	44	45	61		6,671
Calif.	2 Mos.	4472	2		106	326	2	942	882	16	30	19	70	542	92	91	125	100	13,174
Calif.	2 Mos.	404	4	1	172	675	3	104	85	8	1		12	14	4	28	24	3	1,120
Conn.	Feb.	817	3		21	87		31	102		2	2	24	27	24	62	57	6	2,289
Conn.	2 Mos.	100	5	7	39	184	1	88	141		12		2	16	9	7	68	1	451
Del.	Feb.	209			6	45		13	28		6		3	27	24	25	119	5	680
Del.	2 Mos.	50	2	1	18	103		32	49		14		1	4	3	5	2		160
D.C.	Feb.	138			4	74		17	16					8	20	5	9	1	397
D.C.	2 Mos.	83	4	4	8	74		27	38		5			20	1	6	4		271
Fla.	Feb.	485	4	8	91	1378	3	148	119		24		9	70	31	25	57	14	1,742
Fla.	2 Mos.	1118	9	8	67	555	5	318	264	3	57		23	144	58	48	126	28	3,678
Ga.	Feb.	596	2		120	1148		284	279		18		6	38	14	5	8	2	1,599
Ga.	2 Mos.	1167	3	4	4	60		12	8		41		9	87	20	12	15	3	3,192
H. I.	Feb.	74	1		13	126		24	25				1	1		4	16	7	152
H. I.	2 Mos.	130	1		31	119		65	42	22	4	2	1	21	1	2	25	7	328
Idaho	Feb.	274	1		71	249		136	103		10	4	4	6	22	2	20	2	461
Idaho	2 Mos.	900	18	14	118	799	10	216	368	24	47		13	75	83	21	84	31	954
Ill.	Feb.	1929	48	24	261	1653	10	416	756		73		30	173	153	61	126	39	5,752
Ill.	2 Mos.	307	8	6	37	269	1	60	113		24		1	20	11	8	17	4	881
Iowa	Feb.	883	2	20	109	701	1	170	321		43		18	40	51	16	40	10	2,432
Iowa	2 Mos.	419	2	3	51	558		68	248		1		13	54	22	6	26	4	1,406
Kan.	Feb.	872	8	6	111	1033	3	160	417		1		13	4	11	2	0		2,740
Kan.	2 Mos.	336	4		25	302		87	102		1		17	11	18	5	19	4	895
Ky.	Feb.	766			31	299		56	100		4		5	8	7		2		2,026
Ky.	2 Mos.	320		2	53	625		145	201		9		6	23	11	10	27	2	841
La.	Feb.	587	5		44	546		83	92		1		5	29	3	6	5	2	1,636
La.	2 Mos.	1192	3		92	1087		158	173		4		7	72	11	15	19	2	2,838
Me.	Feb.	70		3	6	75		30	38		5		3	11		6	12	3	263
Me.	2 Mos.	161		5	18	148		61	89		7		3	15	4	11	39	7	570
Mid.	Feb.	200		2	29	333		58	106		7		3	28	14	34	45	1	867
Mass.	Feb.	420	7	5	67	567	2	134	191		23		7	61	35	48	69	2	1,646
Mass.	2 Mos.	158	1	1	29	212		82	116		5		3	19	8	85	3		752
Mich.	Feb.	307	1	5	60	364		89	196		13		10	27	30	22	139	4	1,294
Mich.	2 Mos.	782	6	24	98	717	1	251	157		13		3	37	30	22	30	5	2,183
Minn.	Feb.	1274	26	33	191	1389	4	405	260		25		21	75	38	35	69	16	3,830
Minn.	2 Mos.	346	1	2	38	374		72	104		6	1	12	18	12	3	3		995
Miss.	Feb.	714	2	7	17	385		148	227		11	1	18	50	15	5	10	8	2,069
Miss.	2 Mos.	371		1	37	663		154	136		6		3	15	3	2	5	2	934
Mo.	Feb.	883	6	1	75	514		172	237		13		9	29	5	4	10	2	1,800
Mo.	2 Mos.	1198	7	1	132	949	1	310	409	2	19		18	27	36	13	20	4	1,757
Mont.	Feb.	101	1	5	20	144	2	30	57		8	1	1	15	4	6	31		3,146
Mont.	2 Mos.	263	1	17	50	314	2	73	100		9		3	15	4	8	11		385
Neb.	Feb.	293	1	17	29	327		57	113		4	1	4	8	18	5	14	1	896
Neb.	2 Mos.	615	5	17	66	861	1	152	239		4		9	14	29	14	39	1	1,876
Nev.	Feb.	71			10	52		13	27				3	7	2	3	2		193
Nev.	2 Mos.	126			19	87		35	43				4	11	2	3	8	4	342
N. H.	Feb.	18	2	1	20			8			1			6		4	10		76
N. H.	2 Mos.	63	3	3	12	64		24	35		8			11	2	8	34	2	270
N. J.	Feb.	412	11	14	89	514		149	250		51		6	77	40	92	175	3	1,877
N. J.	2 Mos.	28	21	33	137	948	3	309	411		121		6	148	78	154	343	17	3,647
N. M.	Feb.	201			20	149		37	38				1	5		3	4		463
N. M.	2 Mos.	432			51	342		97	74				9	10	4	11	22	2	1,059
N. Y.	Feb.	26	718	14	123	668	7	195	372		38	2	11	125	100	72	239	21	2,738
N. Y.	2 Mos.	49	1955	7	58	354	14	547	1009		131		24	365	213	206	427	37	7,048
N. C.	Feb.	2	615	7	49	670		149	173		17		53	27	23	11	20	1	1,820
N. C.	2 Mos.	1422	10	15	115	1351		303	294		42		72	57	51	24	37	11	3,807
N. D.	Feb.	100	1		20	96		30	50				2	5		1	4		299
N. D.	2 Mos.	233	5		48	220		59	113	1			4	4		2	1		4
Ohio	Feb.	1431	2		83	820		152	254		16		11	35	76	32	39	3	697
Ohio	2 Mos.	580	5	28	182	1713	6	345	578		45		18	75	148	66	107	6	2,201
Ore.	Feb.	86	18		50	485		114	94		5		4	12	4	3	9		1,354
Ore.	2 Mos.	146	1	1	21	245		155	155		12		4	19	13	3	14	2	2,010
Penna.	Feb.	347	3	2	49	496		68	92		13	5	61	27	41	2	4		731
Penna.	2 Mos.	616	10	11	105	665	35	185	290	12	19	8	66	38	84	7	29	2	1,481
R. I.	Feb.	1259	21	31	247	1242	38	368	549		124		12	61	61	147	249	6	2,535
R. I.	2 Mos.	34			5	41	2	10	27		2		32	109	120	235	443	34	4,877
S. C.	Feb.	190	1	2	19	119	2	28	75		5		1	10	6	3	8	2	159
S. C.	2 Mos.	434			16	281		40	42		6		2	16	9	4	15	6	417
S. D.	Feb.	132	1		34	514		96	83		15		5	36	18	3	8		589
S. D.	2 Mos.	372			100	384		24	77				3	5	1	1	8		1,248
Tenn.	Feb.	333			49	387		75	180		2		8	11	1	10	17		436
Tenn.	2 Mos.	770			84	753		169	170		12		1	11	4	8	6	2	1,150
Tex.	Feb.	2345			198	1866	1	361	366		22		4	28	22	13	15	4	963
Tex.	2 Mos.	4824	9	8	383	3678	1	714	670	13	40	3	36	66	34	25	29	16	2,054
Utah	Feb.	172	1		30	125		43	38		5		63	126	71	63	52	32	5,374
Utah	2 Mos.	273	2		62	280		97	92		1		10	10	10	2	2		10,554
Vt.	Feb.	3			2	13		4	7				5	1		19	17		437
Vt.	2 Mos.	23			6	56		9	25					6		2	4		847
Va.	Feb.	315		2	87	346		96	80		1			17	1	10	14	4	166
Va.	2 Mos.	649		7	135	725		197	160		17		8	37	23	33	47	4	1,106
Wash.	Feb.	300	3	3	104	308	1	108	107	7	25		17	68	40	46	83	11	2,183
Wash.	2 Mos.	692	3	7	162	685	1	257	231	11	3	1	3	18	7	3	12	4	993
W. Va.	Feb.	121	1	1	17	134		28	35		15	1	22	37	14				



Sealed Power Stainless Steel Oil Ring

THIS OIL RING IMPROVES FLEET EFFICIENCY



Since its introduction in 1957 engines, Sealed Power's Stainless Steel oil ring has won engine builder acceptance faster than any by far.

New truck engineers, tests, and millions of miles of actual on-the-road operation, proved this ring out for you. No ring yet controls oil as well. Take Sealed Power's

Stainless Steel oil ring—your ability to turn out a good overhaul—and you have an unbeatable combination.

The Stainless Steel oil ring side-seals, holds its fit, retains its tension, resists sludging and corroding, is easy to install. Sealed Power Corporation, Muskegon, Michigan.

Sealed Power Stainless Steel piston rings stop oil pumping

PICTURE OF A PROFIT LOSS



NATIONWIDE SERVICE

AKRON—Motor Rim Manufacturers Co.
ALBANY—Wheels Incorporated
ALBUQUERQUE—Wheels & Brakes, Inc.
ALTOONA—Wheel & Rim Sales Co.
ATLANTA—John A. Harris & Son, Inc.
BALTIMORE—Standard Wheel & Rim Co.
BIRMINGHAM—Wheel, Rim & Parts Co.
BOSTON—New England Wheel & Rim Co.
BUFFALO—Frey The Wheelman, Inc.
CEDAR RAPIDS—Des Moines Wheel & Rim Co.

CHARLOTTE—Carolina Rim & Wheel Co.
CHICAGO—Stone Wheel, Inc.
CINCINNATI—Rim & Wheel Service, Inc.
CLEVELAND—Motor Rim Manufacturers Co.
COLUMBUS—Hayes Wheel & Spring Service
DALLAS—Southwest Wheel, Inc.
DAVENPORT—Midwest Wheel & Rim Co.
DAYTON—Rim & Wheel Service, Inc.
DENVER—Quinn & McGill Motor Supply Co.
DES MOINES—Des Moines Wheel & Rim Co.
DETROIT—H. & H. Wheel Service, Inc.
DUBUQUE—Midwest Wheel & Rim Co.

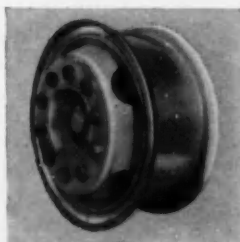
EL PASO—Southwest Wheel, Inc.
EVANSVILLE—Auto Wheel & Rim Service Co., Inc.
FAIRFIELD—Connecticut Wheel and Rim Co.
FARGO—Wheel Service Company
FARMINGDALE, L.I., N.Y.—Wheels Incorporated
FORT WAYNE—Wheel & Rim Sales Co.
GRAND RAPIDS—Rim & Wheel Service Co.
HAMMOND—Stone Wheel, Inc.
HARRISBURG—Standard Wheel & Rim Co.
HARTFORD—Connecticut Wheel & Rim Co.
HOUSTON—Southwest Wheel, Inc.
INDIANAPOLIS—Indiana Wheel & Rim Co.

JACKSONVILLE—Southeast Wheel & Rim Co., Inc.
KANSAS CITY—Borbein, Young & Co.
KNOXVILLE—John A. Harris & Son, Inc.
LANCASTER—Standard Wheel & Rim Co.
LOS ANGELES—Wheel Industries, Inc.
LOUISVILLE—Auto Wheel & Rim Service Co., Inc.
LUBBOCK—Southwest Wheel, Inc.
MEMPHIS—Beller Wheel, Brake & Supply Co.
MILWAUKEE—Wisconsin Wheel & Rim, Inc.
MOLINE—Mutual Wheel Co.
NASHVILLE—Beller Wheel, Brake & Supply Co.
NEWARK—Automotive Safety Inc.

Change the picture

with

Budd wheels



"Wheel wobble" does more than just leave its mark on a wet pavement.

It leaves its mark on your tires, wheels, rig and driver—and writes red ink across your profit and loss statement. With the positive built-in alignment of Budd Wheel construction, you can *change* this picture—and eliminate wheel wobble.

Major design and production improvements have increased Budd Wheel strength . . . cut radial runout by 55%. Excessive vibration is eliminated, reducing front end assembly damage—and decreasing driver fatigue.

YOU PROFIT because you save on downtime and maintenance . . . help avoid accidents . . . and get longer tire life . . . more recaps per carcass. Automotive Division, The Budd Company, Detroit 15.

"The best wheels are built by Budd"

Budd *AUTOMOTIVE*

DETROIT • MICHIGAN

NEW HAVEN—Connecticut Wheel & Rim Co.
NEW LONDON—Connecticut Wheel & Rim Co.
NEW ORLEANS—Southern Wheel & Rim Service
NEW YORK—Wheels Incorporated
OKLAHOMA CITY—Southwest Wheel, Inc.
OMAHA—Morgan Wheel & Equipment Co., Inc.
OMAHA—Omaha Rim & Wheel Co.
PEORIA—Peoria Wheel & Rim Co.
PHILADELPHIA—Kay Wheel Sales Co.
PHILADELPHIA—Thomas Wheel & Rim Co., Inc.
PITTSBURGH—Wheel & Rim Sales Co.
PORTLAND—Six Robbles', Inc.

PROVIDENCE—New England Wheel & Rim Co.
RALEIGH—Carolina Rim & Wheel Co.
RICHMOND—Dixie Wheel Co., Inc.
ROCHESTER—Frey The Wheelman, Inc.
SALT LAKE CITY—Henderson Rim & Wheel Service
SAN ANTONIO—Southwest Wheel, Inc.
SAN FRANCISCO—Wheel Industries, Inc.
SEATTLE—Six Robbles', Inc.
SOUTH BEND—Wheel & Rim Sales Co.
SPOKANE—Bearing & Rim Supply Co.

SPRINGFIELD, ILL.—Illinois Wheel & Brake Co.
SPRINGFIELD, MASS.—New England Wheel & Parts, Inc.
SPRINGFIELD, MO.—Borbein, Young & Co.
ST. LOUIS—Borbein, Young & Co.
ST. PAUL—Wheel Service Co.
SYRACUSE—Wheels Incorporated
TACOMA—Six Robbles', Inc.
TOLEDO—Wheel & Rim Sales Co.
VINELAND—Kay Wheel Sales Co.
WICHITA—Borbein, Young & Co.
WINSTON-SALEM—United-Automotive Service

EXPORT
CLEVELAND, OHIO—C. O. Brandes, Inc.
4900 Euclid Avenue

CANADA
CALGARY—Mutual Supplies, Ltd.
EDMONTON—Alberta Wheel Distributors, Ltd.
LIMOULOU—Palmar Automotive, Ltd.
MONTREAL—Auto Wheels & Supplies, Ltd.
REGINA—Brakes & Wheels, Ltd.
TORONTO—Wheel & Rim Co. of Canada, Ltd.
VANCOUVER—Wheels & Equipment, Ltd.
WINNIPEG—Ft. Garry Tire & Auto Supplies

*you get
your Chevy
fleet parts*

PDQ!

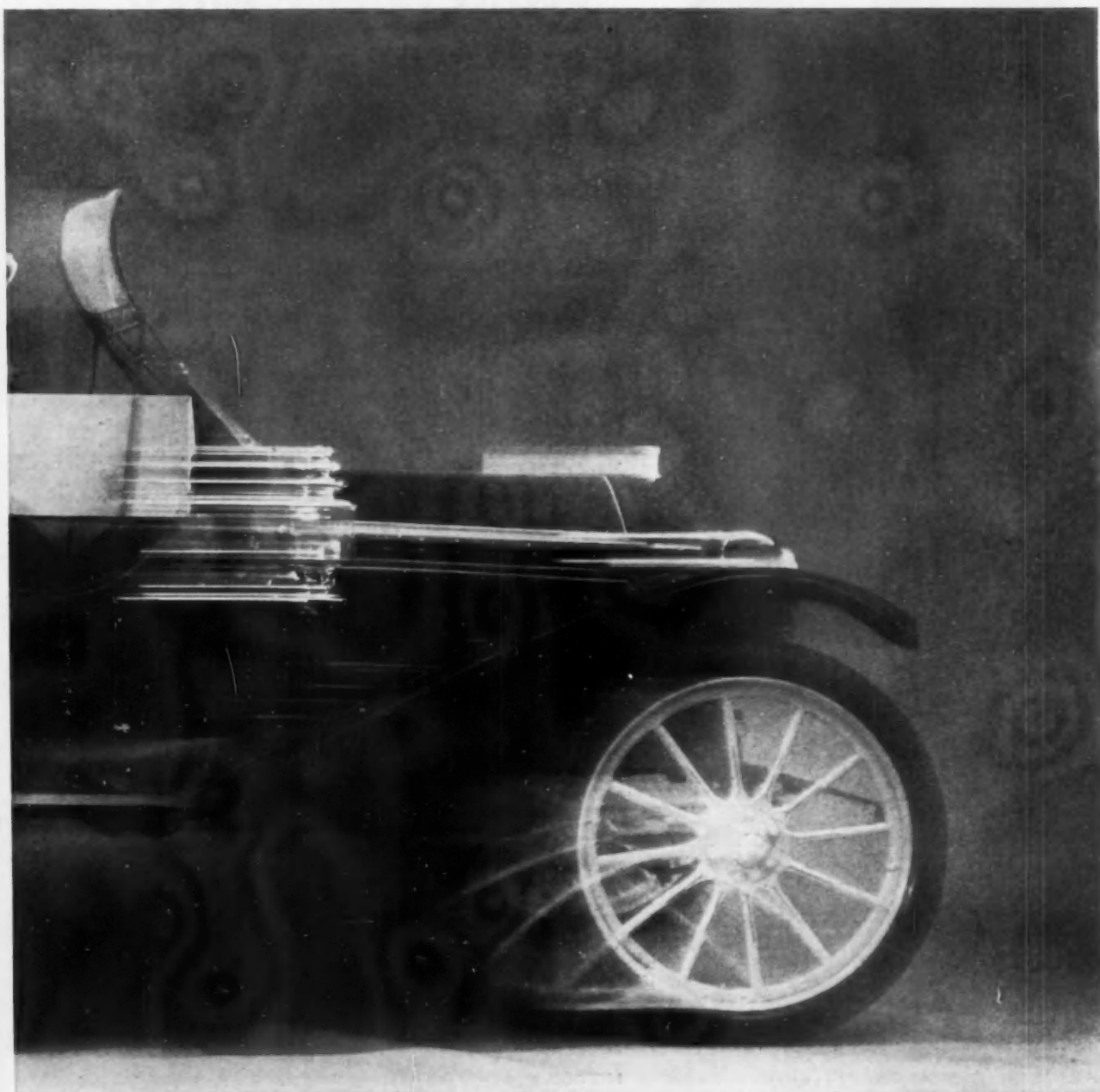
*at your
Chevrolet
dealer's!*



Your Chevrolet dealer is a speed demon when it comes to supplying you with Chevy car and truck parts. He's either got them on hand or he can get them in a hurry from the factory warehouse. This is why he's known in fleet circles as Mr. P.D.Q. (short for Parts Delivered Quick). What's more, you can count on top value for the money when you order genuine Chevrolet parts from your Chevy dealer. That's because they're made for Chevrolets. Precision built to fit right. Built of quality materials to give trouble-free service. Result: easy installation, low maintenance cost, plus protection where it counts to safeguard your fleet investment. What better reasons could you have for buying the parts you need to maintain your Chevrolets from your Chevrolet dealer? . . . Chevrolet Division of General Motors, Detroit 2, Michigan.



there's no business like Chevrolet business . . . make your Chevy dealer your partner in service!





GOES

- ★ **EMPLOYEE
PRODUCTIVITY**
- ★ **COMPANY
PRESTIGE**

WHEN YOU EQUIP YOUR FLEET WITH GM CAR AND TRUCK AIR CONDITIONING!

Up-to-date companies find Harrison Air Conditioning a great investment to up productivity—up prestige! It creates an ideal business climate. With Harrison Air Conditioning, representatives feel refreshed and invigorated. They just naturally make better calls . . . and *more* calls! Cool, washed air circulates for a healthier working atmosphere. And, clothes stay clean and pressed . . . with dirt, grime and excess humidity locked outside. Your company's image is reflected on every call in your employees' noticeably-neat appearance. Air-conditioned cars and trucks, like air-conditioned offices, are a mark of modern business. They show company progress and add to company prestige. So whether you have already purchased or are about to order your new Cadillacs, Buicks, Oldsmobiles, Pontiacs or Chevrolets*, see your GM dealer about Harrison Air Conditioning—a reliable General Motors product for modern fleet efficiency.

*Harrison Air Conditioning is also available on most 1961 Chevrolet trucks.



SEE YOUR GENERAL MOTORS DEALER FOR AN AIR-CONDITIONED DEMONSTRATION

GM cool air by the carload
HARRISON
 • COMPRESSOR BY FRIGIDAIRE • **AUTOMOTIVE AIR CONDITIONING**

HARRISON RADIATOR DIVISION, GENERAL MOTORS CORPORATION, LOCKPORT, NEW YORK
 AUTOMOTIVE RADIATORS • OIL COOLERS • THERMOSTATS • AIR CONDITIONERS • HEATERS • DEFROSTERS



Fram proves heap big difference in filters

The most modern research methods—including radioactive tracer techniques—were used to prove Fram Filters with new Wear-Guard construction trap up to 40% more dirt than any other filters tested.

Give your vehicles this outstanding protection by taking advantage of Fram's exclusive **Fleet Survey System**. It provides a constant check on every vehicle's filters to stop unnecessary engine wear and deliver maximum gas mileage. All with an absolute minimum of inventory! To get details, just drop a card or phone... FRAM CORPORATION, Providence 16, R. I. GENEVA 4-7000.

YOUR FIRST LINE OF
ENGINE PROTECTION

FRAM
OIL AIR FUEL WATER
FILTERS

STUDEBAKER ANNOUNCES America's first in a new lower

Today you can replace gasoline truck costs with diesel profits . . . up to 50%.

This great newsmaking series of 4 cylinder medium duty Studebaker Diesels, powered by GM Series 53 engines, gives users of 19,500 to 23,000 lbs. GVW class trucks an opportunity for operational savings that can change the course of a business. Whether you concentrate on over-the-road or short haul operations, these new trucks offer you the major cost economies the diesel has long brought to larger trucks.

OVER-THE-ROAD

Should you go diesel in this lower weight class? If you run gasoline engine trucks of this size—or gasoline engine tractors up to 41,000 GCW—more than 125 miles per day, the economical, mathematical answer is yes!

On the basis of all diesel experience, you'll automati-

cally cut operational costs in half, expect to have no-out-of-frame overhaul for up to 200,000 miles. You'll eliminate the 18% of truck breakdowns due to ignition failure, and cut trip time significantly through more constant and higher average road speeds.

Average Saving: Up to 50% on operating costs over gas engine trucks of equal weight. This saving can make



true diesel weight class (19,500 to 23,000 lbs. GVW)

all the difference in improving your profit structure and gaining an edge in a highly competitive market.

SHORT HAUL

How about Studebaker Diesels for "short haul"? Again, yes—savings are often as big or bigger

In stop-and-go in-city or inter-city service, operational savings jump up to 50%-60%. Diesels use only ¼ the fuel of equivalent gas engines when idling (i.e. any condition where the engine uses 25% or less of rated h.p.). If you use larger GM diesels for over-the-road work, a switch to 19,500 or 23,000 GVW Studebaker Diesels for trailer break-up and delivery gives the extra economy of low cost parts and single type maintenance operations. And here is a versatile truck you may press into service on over-the-road hauls when you have a shortage of heavy equipment. No worry—these Studebaker Diesel trucks can really take it.

Average Savings: Again up to 60% of normal operating costs for many types of inter-city pickup and delivery, terminal operations.

PTO OR HIGH IDLE

What additional advantages with Studebaker Diesels? Plenty.

Use them for driving PTO equipment such as pumps, post-hole diggers, air compressors. Diesel power has no superior where the amount of work is best measured in terms of hours of engine operation—as in refuse trucks, highway maintenance vehicles, mobile feed mills, fuel oil delivery.

Average Saving: Up to 75%—diesels use as little as ¼ the fuel of gasoline engines in high-idling or power-take-off applications.

Production of these great new Studebaker Diesels has already been scheduled. We suggest you ask your Studebaker dealer for the specifications of this remarkable new truck series.

Studebaker Truck Division
Studebaker-Packard Corporation
South Bend 27, Indiana

____ Please send me a detailed analysis of probable savings through use of Studebaker Diesels.

____ I would like a Studebaker Truck cost consultant to call on me.

Name _____ Title _____

Firm _____

Address _____

City _____ State _____

Number of Trucks _____

CCJ 5-61

STUDEBAKER DIESEL TRUCKS

Tougher Than The Job!

More details? Circle 164 on reply card inside back cover



in trucks and tractors

It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover

S-P adds diesel to Transtar line

OPERATING ECONOMY of the small diesel engine is now offered to fleet operators in Studebaker-Packard's Transtar line of light- and medium-duty trucks.

Scheduled to start production in June, the Model No. 6E45 may look the same as other Transtars, but it

isn't. S-P says the chassis is specially engineered for diesel power. The new conventional truck models range from 19,500 to 23,000 lb GVW and 35,000 to 41,000 lb GCW. Either 5-speed-direct or overdrive synchromesh transmission is offered. Available options include power steering, an au-

tomatic hill holder and others.

Powerplant is the GM Series 4-53 small diesel engine. It's said to give low-cost operation with minimum downtime for moving peak loads in short intercity hauls and city pickup and delivery work. At 2800 rpm, it's rated at 130 hp with 271 lb ft torque. Said to be extremely compact for a diesel of its capacity the engine has 3 7/8 x 4 1/2-in. bore and stroke.

More details? Circle 360 on reply card



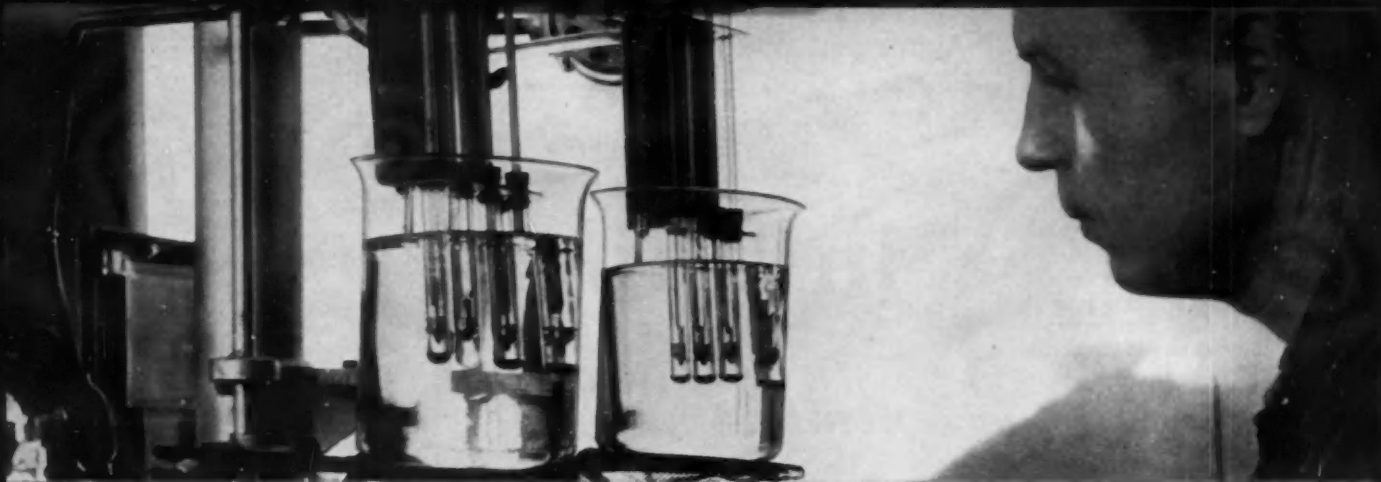
Two new fiberglass tilt-cab tractors with V-8 valve-in-head, gasoline engines and GCW ratings up to 70,000 lb are latest units from Diamond T. Model No. 738CG has engine rated at 207 hp with 354 lb ft torque at 3400 rpm. Engine on the 838CG has rating of 235 hp with 412 lb ft torque at 3400 rpm.

More details? Circle 450 on reply card inside back cover

This new wide cab seats four men or even five in comfort, says maker White Motor Co. It could pay off in boosted employee morale. Crew will arrive at the job rested and ready for action if a couple of them don't have to ride in the load compartment. Added space increases payload, too, says White.

More details? Circle 451 on reply card inside back cover





Dropping point test shows how greases react to heat. Beaker fluid has been heated to 390° F. All greases tested except Darina (second tube from left) have passed from solid to liquid state.

BULLETIN:

Shell reveals the remarkable new component in Darina Grease AX that helps it last up to 3 times longer than soap-base greases

Darina® Grease AX is made with Microgel*, the new thickening agent developed by Shell Research.

Severely tested for 18 months, Darina AX with Microgel proved its ability to resist washout, even in mud and slush—stay smooth and buttery at high temperatures—and reduce maintenance.

Read how this superior new multi-purpose grease can help solve your lubricating problems.

THERE IS no soap in Darina Grease AX. No soap to melt away—wash away—or dissolve away.

Instead of soap, Darina AX uses Microgel—a development of Shell Research.

What Microgel does

Because of Microgel, Darina AX has no melting point. It won't run out of bearings.

Even compared to soap-base greases, Darina AX provides significantly greater protection under adverse service conditions.

Resists washout

Mix water into Darina AX and the grease maintains its consistency. It

shrugs off water—won't emulsify. For fleets that must operate in snow, slush, rain or mud—Darina AX is an ideal choice.

Longer lubrication life

Shell scientists tested Darina AX, under wet conditions, in a special device called an Oscillating Friction Machine.

Darina AX kept its lubricating qualities twice as long as a premium soda soap-base grease; 2½ times longer than a calcium-soap grease; 3 times longer than an aluminum-soap grease.

Results of field test

In a recent field test, 15 firms used

Darina AX in chassis and wheel bearings of over 1000 vehicles. These buses, trucks and vans rolled up 30,097,000 chassis miles. The results:

1. Every company was pleased with the performance of Darina AX.
2. There wasn't one wheel bearing failure due to grease deficiency.
3. In many cases, re-lubrication schedules could be extended.

For details, see your Shell Representative. Or write: Shell Oil Company, 50 W. 50th St., N. Y. 20, N. Y.

*Registered Trademark



A BULLETIN FROM SHELL
—where 1,997 scientists are helping
to provide better products for industry

More details? Circle 165 on reply card inside back cover



in trailers

It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover



All-aluminum bulk flour trailer is an Airslide unit offered by Fruehauf Trailer Co., Detroit. Pneumatic load-unload system permits self-loading from overhead bins or through suitable transfer unit from an Airslide car. All-weather operation is possible since there's no need to open hatches to insert fitter socks, says Fruehauf. The flour trailer has 40,000-lb capacity with completely smooth interior for easy cleanout. Blowers and airlocks are electrically operated, require little maintenance.

Want more details? Circle 320 on reply card



Trailer for two-way hauls of steel and grain is a heavy-duty platform unit with grain sides. American Body & Trailer Co., Oklahoma City, Okla., says its new Model No. 6600 features special hi-tensile-steel construction of deep side frames and I beam. Extra-deep crossmembers are for added strength in front section. D rings are evenly spaced along the sides to provide tiedowns for steel cargo. The two-way trailer has 10-in. mountain brakes and West Coast tandem setting.

If you'd like more details, circle 321 on card

All-aluminum trailerized transport tank from The Heil Co., Milwaukee, Wis., hauls up to 6000 gal of liquid food, petroleum or chemical products. Heil says the fiber-glass-insulated unit is designed for 35-lb working pressure for top unloading. Quick opening, pressure-type manhole is surrounded by an overflow dam. A 2-in. stainless-steel, top-unloading line with 2-in. gate valve leads from 6-in. sump at bottom rear. Five cleanout ports speed automatic cleaning of the clean-bore tank.

Want to know more? Circle 322 on reply card



New Nitrous Oxide (laughing gas) transport trailer from Delta Mfg. Co., Baton Rouge, La., has 4845-water gal capacity and 350-psi working pressure. It's equipped with pump and meter system and features a Brunner refrigeration system that keeps cargo temperature at -20 deg F, operating only three hours a days. The steel tank has aluminum outer jacket and 6-in. styrofoam insulation. Mounted on a Trailmobile tandem assembly, the N₂O transport is 35 ft long and 74¼ in. ID with 18,900-lb tare weight.

For more information, circle 323 on reply card





Super-strength bearing takes 3-ton loads

This is the new Federal-Mogul AP steel-backed aluminum bearing. It can take pounding up to 6,000 pounds per square inch (pressure equal to the weight of this medium truck). This bearing was designed by Federal-Mogul engineers for the new kind of engines appearing today . . . shorter engines with high horsepower, high compression, and reduced bearing area.

The secret of this bearing's superiority lies in its new aluminum-alloy lining. It has both the high strength of aluminum and good bearing "oiliness". And in

addition to its exceptional fatigue strength, this Federal-Mogul aluminum bearing is also highly resistant to corrosive engine acids.

This AP aluminum bearing is just one in the complete Federal-Mogul line. Others include the 5-layer copper-alloy, straight copper-alloy, and babbitt bearings. Each is designed for a particular engine . . . and gives superior service in it. Whatever kind of bearing you need for replacement, specify Federal-Mogul for the best. Most fleet owners do!



FEDERAL-MOGUL ENGINE BEARINGS

FEDERAL-MOGUL SERVICE

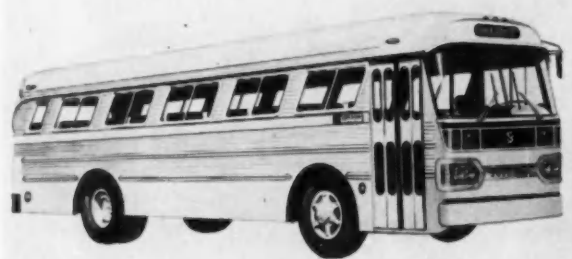
DIVISION OF FEDERAL-MOGUL-BOWER BEARINGS, INC. • DETROIT 13, MICHIGAN



in buses

It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover



1961 Superior Suburban Express



1961 Superior City Express

Superior shows new transit buses

ALL TRANSIT NEEDS are said to be met by design and engineering features of the 1961 bus line from Superior Coach Corp., Lima, Ohio. Five models are offered in the company's "Practical Transportation" series.

The *City Express* (upper right) seats 32-35 passengers with either longitudinal or forward-facing seating. Four-leaf, folding-type entrance and exit doors are air-electric, push-button operated.

The *Suburban Express* (upper left) seats 37, 41, or 45. Along with features of City Express, this model

offers tinted glass, slantline aluminum side windows and solex windshield.

The *Sightseeing Express* (lower left) has special seats for extra comfort of 37, 41, or 45 passengers. It has features of other local transit units, plus up to four power ventilators, Dusk Lite laminated safety glass roof, tinted side windows with sliding sash and public address system.

The *Inter-City Express* (lower right) features a large restroom with self-contained flush toilet and stainless-steel sink. Lavatory has separate

water supply with initial load providing 60-100 usages. Under-floor luggage compartments offer optional lighting.

Also available, but not shown, is the *Airport Express* which seats 35, has 169-cu ft luggage compartment.

All feature new exterior styling, a wide variety of seats (including reclining type), Scene-O-Ramic wrap-around windshield and broad rear window. Air conditioning for the new buses is available in three self-powered models with cooling capacities from 33,000-68,000 Btu. All exterior panels and structural members are of corrosion-resistant Super-Zinc steel.

More details? Circle 364 on reply card

1961 Superior Sightseeing Express



1961 Superior Inter-City Express





Two fleets operate new GM diesel-powered bus

FIRST FLEETS to order General Motors' new PD4106 diesel-powered intercity coach (Nov. '60, page 320) are Eastern Trailways Bus System (above left) and Greyhound Corp. (right).

The 103 units now operated by Trailways are the first in its "Silver Anniversary Fleet." They're in charter as well as route service from Chicago to the Carolinas.

Greyhound ordered 255 of the luxury buses for its "Scenicruiser" fleet.

Features of the model include rest-room, air conditioning and air suspension. Special decor is accommodated to fleet requirements.

The PD4106 is powered by GM's 8V-71, 567.4-cu in., V-8 diesel engine rated at 272 hp @ 2000 rpm, 770 lb ft torque @ 1200 rpm.

More details? Circle 365 on reply card

Air conditioners for installation as added equipment on all bus models are offered by Thermo King Corp., Minneapolis, Minn. Said to be easily installed to give "factory-made" look, units are available in various sizes to meet different temperature requirements. The Thermo King unit is a one-piece package with its own engine. It's said to be a complete, independently operated mechanical system.

More details? Circle 366 on reply card

Fleet saves on bus step repair

COST SAVINGS up to 50 per cent result from use of new SP-10 rebuilding compound on stair treads in a 492-bus fleet in New Haven, Conn. The Connecticut Co. reports that, in a 3-mo period, it has saved about \$34 per bus in repairing worn steps. Company says the new process is easier and faster, results in a more durable finished step surface. Savings are realized from fewer man-hours spent on the job and less vehicle downtime.

Made by Baird Dynamic Corp., Stratford, Conn., SP-10 compound is said to provide a tough, non-skid, positive-adhering, flexible surface. It resists wear, weather, oils and most chemicals. When cured, it won't crack or split under heavy vibration and foot-pounding pressure, says maker.

The compound consists of three parts—Plastic Sealer Resin, Curing

Catalyst and "Grip-Grit" abrasive. When properly mixed, they form a heavy liquid that's applied with a brush or trowel. The amount of catalyst used determines curing time which can be as little as 15 min.

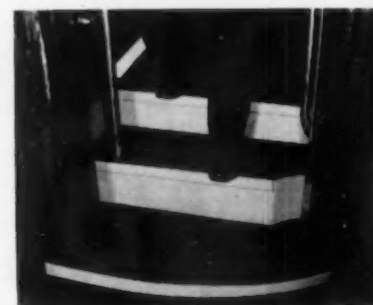
The Connecticut Co. says when a bus comes into the shop for step repair, it's ready to return to service in just two hours.

Shown here are simple steps the fleet's shop performs to do the job. They are . . .

- First, worn steps are ground (left), then brush-cleaned. This prepares surface for good adhesion of the plastic sealer.

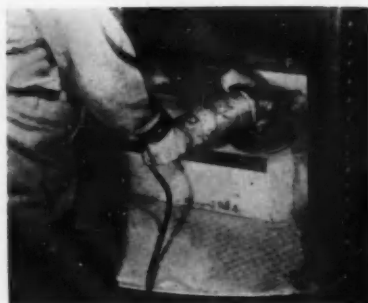
- The three parts of the compound are then mixed as required and applied over the clean, roughened surface (center).

- "Grip-Grit" is sprinkled liberally



over the sealer base before it's cured (lower right). The surface is then trowled lightly to work the abrasive into and bind it to the hardening compound. Curing time for the mixture used here is 15 min.

The finished rebuilt bus step treads you see above are not just attractive and long-lasting. Most important—the durable non-skid surface assures safe, slip-free entrance and exit for passengers in all kinds of weather. More details? Circle 367 on reply card

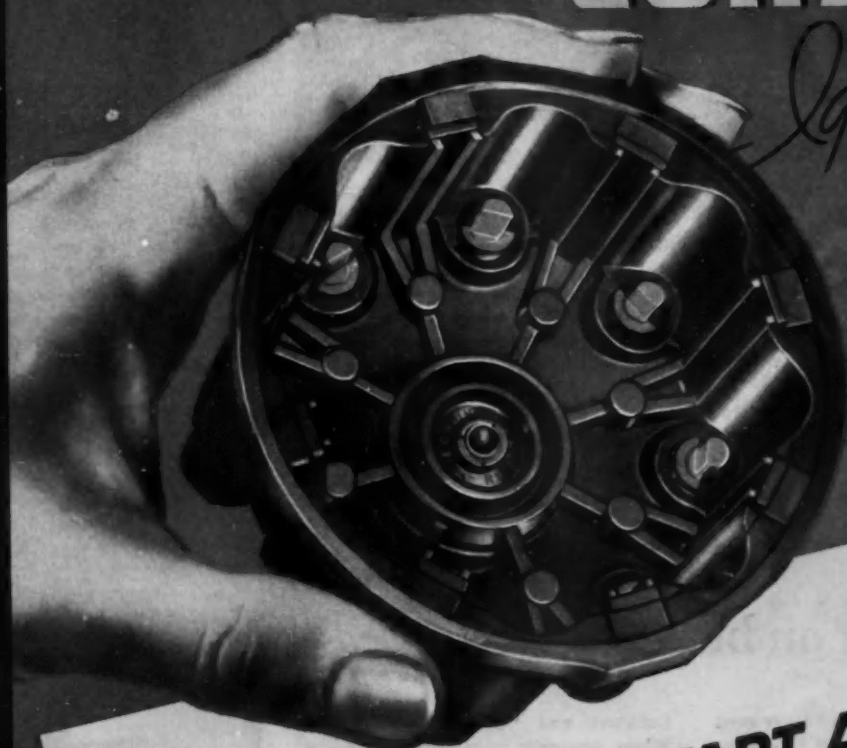


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ECHLIN

Ignition



**BETTER TO START AND
BEST IN THE LONG RUN**



ECHLIN

Ignition

UNITED

Brake Parts

THE ECHLIN MANUFACTURING COMPANY • BRANFORD, CONN.

UNITED PARTS DIVISION • CHICAGO, ILL.

ECHLIN-UNITED OF CANADA, LTD., TORONTO

IGNITION & ELECTRICAL PARTS • HYDRAULIC & POWER BRAKE PARTS • BRAKE CABLES • BRAKE FLUID • SPEEDOMETER CABLES



NEW 1961

Fruehauf Volume★Van Truck Bodies Are Trailer-Strong!

The Industry's Only Truck Body Built to the Strength of a Trailer!

The new 1961 Fruehauf Volume★Van Truck Bodies are now joining fleets all across America. And they are ready to *help you earn more*, too! Here is the industry's *first and only* truck body with the rugged dependability and low maintenance cost of truck-trailers. Feature-for-feature the new Fruehauf aluminum Volume★Van Truck Body incorporates all of the durability, all of the longer-life features of the Fruehauf Volume★Van Trailer, at a cost so low you'll find it hard to believe!

Your choice of weight-saving aluminum beaded panel or exterior post design, ready for mounting on your chassis. Available in a wide variety of doors, options and lengths to fit your particular hauling needs. See them now at your local Fruehauf Branch—or contact Fruehauf Trailer Company, Detroit 32, Michigan.



The Yardstick of
Quality in the
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FRUEHAUF TRAILER COMPANY

10952 Harper Avenue • Detroit 32, Michigan

Please send me complete information on your Trailer-Strong 1961 Volume★Van Truck Body.

Name _____ (please print)

Company _____

Address _____

City _____ State _____



in fleet cars



1961 police cars in four models

with choice of six engines are now offered by Dodge. Two- and four-door sedans are specially equipped for highway, general or municipal patrol fleets. There's also a public safety station wagon. Unitized bodies on all models feature special anti-corrosion treatment. Engine choices include a 383-cu in., ram-induction V-8 for top highway performance; 383-cu in., 325-hp V-8; 361-cu in., 305-hp, D-500 V-8; 318-cu in., 260-hp V-8; 318-cu in., 230-hp V-8 and 225-cu in., 145-hp, "slant-6" for economical city patrol.

More details? Circle 452 on reply card inside back cover



Two new 1961 two-door coupes

just announced by Buick include the luxury sports model shown here, called the Skylark. For fleet operation, there's a two-door Special offered only in the standard series. Said to be Buick's lowest-priced car for '61, it's powered by a 155-hp, liquid-cooled, aluminum V-8 engine with 8.8 to 1 compression ratio. On regular gasoline, it's said to give top performance and operating economy. Three-speed synchromesh transmission is standard. With 188-in.-long unitized body on 112-in. wheelbase, the new Special weighs just 2700 lb.

More details? Circle 453 on reply card inside back cover



in truck bodies

Aluminum delivery body for installation on most forward control chassis models is offered in all popular sizes. The all-new "Star-Lite" body is built by ALF-Herman Corp., St. Louis, Mo. Standard equipment includes sliding side doors, sliding window in streetside door, cab ventilator, fully-insulated and lined ceiling, smooth-aluminum loadspace floor and windows in rear door. A full range of options is available.

More details? Circle 361 on reply card

New high yield-strength steel for heavy-duty haulage equipment is designated "T-1" by U. S. Steel Corp. Tough, yet lightweight, it's said to permit increased payloads. Dump body shown, built of light-gage "T-1," has 45-ton capacity. A similar standard steel unit carries only 40 tons. "T-1" resists impact, abrasion and corrosion and withstands unusual stress under temperatures from -50 to +900 deg F, says maker.

More details? Circle 362 on reply card

Mobile catering truck Model CB1 is offered to industrial caterers by Western Urn Mfg. Co., Los Angeles, Cal. It's on a ½-ton Chevrolet chassis with outsize wheels and tires. At rear of unit are two coffee urns, with total 26-gal capacity and 20-gal water reserve, and an oven for dispensing hot foods. Other food items are served through side compartments. Shelves are provided for merchandise display.

More details? Circle 363 on reply card





The Autolite ANCHOR-BOND® Battery. Different. How? Its power-producing plates are welded to the case with a special epoxy resin. Why? To prevent plate vibration. Plate vibration caused by road shock, engine roughness. Vibration that can ruin an ordinary battery long before its time. The method used to immobilize the plates in an Autolite ANCHOR-BOND Battery is patented. No one else can use it. Nobody does. That's why Autolite ANCHOR-BOND Batteries easily outlast ordinary batteries in any application involving severe vibration. Like fleet use. How much more does the ANCHOR-BOND cost? Logical question, amazing answer: no more than ordinary fleet batteries! Next time you need batteries, remember Autolite ANCHOR-BOND... **SOLID AS A ROCK**





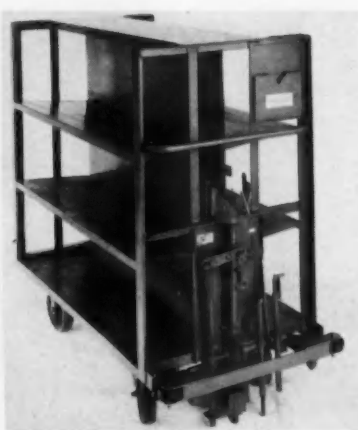
in cargo handling

It's easy to get more details about the items described.

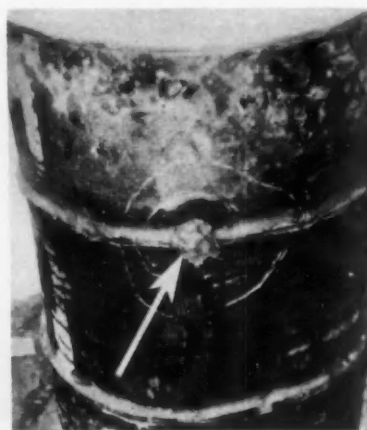
Just fold out and use free reply cards inside back cover



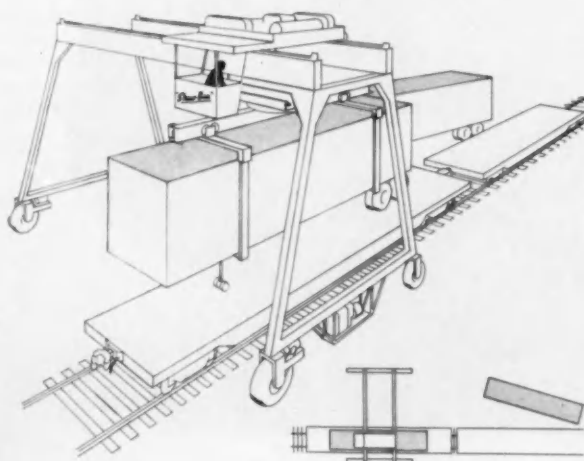
New 23-ton lift truck with pneumatic tires is the Challenger 460A from Hyster Co., Portland, Ore. Rated at 46,000 lb at 48-in. load center, it features a new hydraulic system to handle increased lifting capacity. Either gas or diesel power is available, with 3-speed powershift transmission. Power steering and air brakes are standard. More details? Circle 368 on reply card



Automatic switch cart can be dispatched to desired location and automatically switched off the dragline conveyor. Offered by SI Handling Systems, Easton, Pa., the Model No. 700 has a shock-absorbing pushing bumper and tow pin to permit trucks on the conveyor to push the switched-off truck into a non-powered spur. More details? Circle 369 on reply card



Leak repair compound called Metalset A-4 is for on-the-spot repair of metal containers. Made by Smooth-On Mfg. Co., Jersey City, N. J., the epoxy resin compound is said to provide an immediate leak-tight patch on liquid-filled drums. You can even repair a chemical container that springs a leak in transit, says maker. More details? Circle 370 on reply card



Self-propelled gantry-type crane is a rubber-tired unit said to be highly maneuverable on paved surfaces in piggyback loading and unloading operations. The new Shaw-Box piggyback gantry crane is the latest addition to the line from Manning, Maxwell & Moore, Muskegon, Mich. Its self-contained engine (either gasoline or diesel) drives a generator and hydraulic motor to supply power for all crane movements. Fixed rear wheels follow steerable front wheels which operate from two hydraulic motors. Self-locking worm traverse drive eliminates need for a braking system. An electric trolley provides load traverse and lifting speeds with positive braking control. Rotating load grab mechanism with anti-sway device turns load as needed. All controls are located in the cab which is mounted on the trolley to give operator a clear view of all crane movements. This permits one man to handle the entire loading and unloading cycle. More details? Circle 454 on reply card inside back cover

GRIP ALONE WON'T GRAB A FISH



It's the same with oil seals . . . the tightest fit doesn't mean the best protection against leakage

An oil seal can fit *too* tightly. Some do, creating friction and heat that can wear down shafts, deteriorate seals and increase power loss. National bases seal design on scientific factors—shaft speed, temperature, fluid consistency and pressure, etc. That's why Syntech rubber and Micro-Torc® leather seal positively *without* excessive friction.

Synthetic rubber can be compounded and molded to meet almost any sealing situation. This versatility, together with engineering know-how, makes National's Syntech rubber seals ideal for meeting the requirements of changing automotive applications. Syntech is the preferred sealing mem-

ber under more strenuous conditions such as high shaft speeds and high temperatures.

Micro-Torc processing by National gives leather a coating of synthetic rubber with graphite. This insures protection against leakage, and keeps dirt out. Leather seals are preferred when intermittent lubricant starvation is a factor. They absorb and hold oil, providing self-lubrication.

Protect vital parts on your fleet equipment by using National Oil Seals—the most complete line available. Your National Seal distributor offers fast service on the seals you need for replacement.



NATIONAL OIL SEALS

FEDERAL-MOGUL SERVICE

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in vehicle accessories

It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover

Urethane foam panels for reefer insulation (see Mar., page 100) are now made on a continuous production-line basis by Insulfoam, Inc., Keyport, N. J. The 4 x 8-ft panels are for immediate installation at the plant. Strong and lightweight, they have a core of pour-in-place Nopco Lockfoam.

More details? Circle 371 on reply card

Fiber glass insulating panels for reefers are offered by Molded Fiber Glass Body Co., Ashtabula, Ohio. They feature integral air-circulating ribs, nesting edges and gloss-white surfaces. Only 0.12 in. thick, panels are 84 in. long by 37 1/4 or 49 1/4 in. wide.

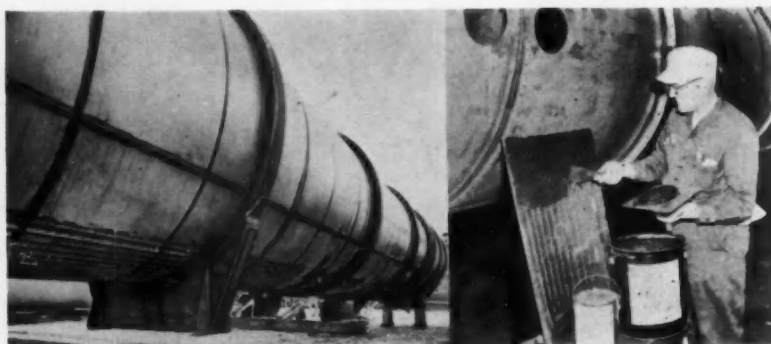
More details? Circle 372 on reply card

Brake power booster for any type existing braking system in trucks or autos is made by Por-Del, Inc., Escondido, Cal. It's for remote or direct attachment to present master cylinder. Maker says the compact, self-activating unit operates with or without engine to give better brake control.

More details? Circle 373 on reply card

PM record labels made by Avery Label Co., Monrovia, Cal., help keep your fleet's vehicles in shape and drivers on their toes. To place on dashboard as reminder for driver, label shows unit number, date, speedometer reading, next PM due date, mechanic's name and special safety slogan.

More details? Circle 374 on reply card



Heat transfer system for tank trailers speeds up unloading of heavy liquids, according to producer Tranter Mfg. Co., Lansing, Mich.

The new system features Platecoil units which are applied to the underside of tank surface with heat transfer cement, as shown. Plates are

channeled on the outside to permit circulation of heating liquid.

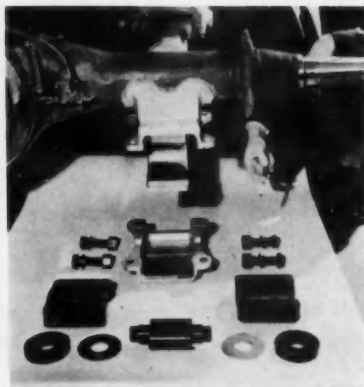
The curved, 22-in. wide plates come in various lengths to provide for installation around surface obstructions.

Units may either be applied as shown or built into tank wall.

More details? Circle 375 on reply card

New tandem axle suspension features liberal use of rubber at all pivotal points which eliminates need for lubrication and provides a smoother ride for cargo and driver, says maker Eaton Mfg. Co.

Rubber parts used in each of the



four spring ends of the new suspension are shown in the foreground of photo at left. These include the spring eye bushing, two side cushions and two pads.

Installation is said to be easier due to single mounts on each side of the unit which tie it directly to the truck frame.

Other features claimed for the newly designed Eaton suspension are:

- More stability resulting from wider spring spacing.
- Easy access for maintenance of axle and suspension.
- Simple assembly requiring no special tools.
- Interchangeability of all parts.

• Same design for all on- or off-highway vehicles with 28,000- to 38,000-lb tandem axles.

More details? Circle 376 on reply card

Give your 'phone a mind of its own! A mechanical "memory" made by Dialaphone, San Mateo, Cal., dials your telephone automatically—all you do is press one key. The telephone company installs the unit which saves time spent looking up numbers and eliminates costly dialing errors.

The compact, electrically operated Dialaphone system "remembers" up to 850 numbers you use in conducting your fleet's business. Its "memory" is a punched tape containing your personal directory listing of names and numbers. You may change or add numbers with a simple device in the unit.

To place a call, you turn the selector until your party's name appears in the view frame. This brings the tape into position. Then press the starter key and Dialaphone dials the number. It's said to operate through any telephone system including direct distance dialing (where area code precedes local number) or in conjunction with a switchboard.

A color-coding system groups numbers under specific uses. For instance, various terminals may be grouped on one color section of the tape, in alphabetical or numerical order, according to your means of identification. Customers, suppliers, associations, etc.,

New alternator-generator from Curtiss-Wright Corp. is said to increase electrical power of all heavy-duty vehicles in fleet operations. The compact unit is mounted under the hood in place of the conventional generator.

In reefer operation, maker says the alternator-generator produces enough current to meet all normal vehicle requirements and also power the refrigeration unit.

In most applications requiring a separate generator to run auxiliary equipment, the new unit handles the full job, says C-W.

More details? Circle 378 on reply card

Trailer power brake unit for small and medium-sized trailers equipped with brake drums and hydraulic cylinders is the self-contained Uni-Brake from Velvac, Inc. For vacuum operation from any gas-powered car or truck, it's said to give foot-pedal synchronized braking. When disconnected, it automatically applies trailer brakes.

More details? Circle 379 on reply card



As shown, Dialaphone sits next to 'phone. The units are color-matched

may be grouped in other colors. A general alphabetized listing is on white tape. If you're placing consecutive calls to each number in a group, Dialaphone will automatically position the next name in the viewer as one call is completed. You just press the starter key when you're ready for the next.

Even calls you can't dial may be listed on the tape. For these, you locate the name in the viewer. Dialaphone dials the operator and you read off the recorded information.

More details? Circle 377 on reply card



Windshield washers made by The Anderson Co., Gary, Ind., have freezeproof, shockproof reservoirs with adjustable vertical-mounting brackets. The "Two-Quart" (No. 2200) is for universal installation in all U. S. trucks and cars. The "Compact" (No. 2100) is for smaller foreign-made vehicles with limited underhood space.

More details? Circle 380 on reply card



in descriptive
free literature

In-transit reefer system for perishable and frozen foods is described in a folder (No. F-1410) from Linde Co., New York City. The new Polarstream system (Mar., Page 104) uses liquid nitrogen as the only refrigerant.

For free copy circle 484 on card

Bus and truck shock absorbers in the Monro-Matic line are listed in a new 1961 catalog from Monroe Auto Equipment Co., Monroe, Mich.

For free copy circle 485 on card

Cargo damage prevention with new truck freight bracing equipment from Sparton Corp. Detroit, is shown in a brochure from that company.

For free copy circle 486 on card

Electrical equipment for 1961 fleet passenger cars is described in Delco-Remy publication No. DR-5210. Servicing and adjusting of various components is explained and illustrated.

For free copy circle 487 on card

Oil filter record chart in a pocket-sized folder is offered by W.G.B. Oil Clarifier Inc., Kingston, N. Y. Vehicle oil condition is checked between changes by a special blotter included in the folder.

For free copy circle 488 on card

Plastic vehicle-body fillers are shown in a brochure titled "Jet Plastics for the Automotive Industry." It's offered by U. S. Chemical Plastics, Inc., Canton, Ohio.

For free copy circle 489 on card

Fifth-wheel parts and a complete line of brake replacement parts for trucks and trailers are featured in the new 1961 catalog from Transit Parts Co., Willoughby, Ohio.

For free copy circle 490 on card

Replacement axles for all trucks, buses and passenger cars are listed in a new catalog (No. 20) from U. S. Axle Co.

For free copy circle 491 on card

Adjustable switches for pressure and differential pressure ranging from 15 to 200 psi are shown in Bulletin E9 from PALL Corp., Glen Cove, N. Y.

For free copy circle 492 on card

THERE'S MORE



in vehicle accessories

Continued from Page 145

Power steering hoses are offered in a new universal series by Everhot Products, Chicago. The Everflex line includes 21 pressure and seven return hoses said to replace 152 original-equipment units. One end is pre-bent, other is straight to use as-is or bend as required for installation. More details? Circle 381 on reply card

Passenger car tire featuring improved nylon-cord construction and 5-rib tread design is the new Ultra M 200 from Lee Tire & Rubber Co. It's said to offer increased traction and blow-out safety. Lee also says it's designed for quiet ride with no hum, squeal or drone. More details? Circle 382 on reply card

A. H. SEEBOLD REPORTS...

"INCREASE DELIVERY RATE 20% WITH CENTURY LP-GAS CARBURETION"

BLAW-KNOX M55
SIX YARD MIXER



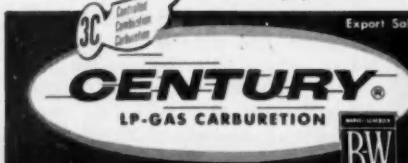
A. H. SEEBOLD, PRESIDENT—A. H. SEEBOLD TRUCK SERVICE & EXCAVATING COMPANY GRANITE CITY, ILLINOIS REPORTS...

"since May of 1959, we have purchased four Blaw-Knox M55 six-yard mixers with Century LP-Gas Carburetion installations as factory equipment.

Every phase of our operation has improved. The tremendous difference in maintenance requirements is summed up by the fact that each month our four LP-gas mixers have consistently delivered 20% more cubic yards of concrete than comparable gasoline operated vehicles. This is due to the fact that our LP-gas vehicles are not tied up in the maintenance garage. Plugs last longer, less frequent oil changes, no major breakdowns and our drivers report extremely smooth operation especially on the mixer engines.

We have a complete conversion and original equipment purchase plan that will eventually make us a complete Century LP-Gas operation."

SEND FOR THE CENTURY "FACT PAC" GIVES MORE DETAILS... OTHER CASE HISTORIES.
Insist on complete Century LP-Gas carburetion systems for top performance.



CENTURY
LP-GAS CARBURETION

Export Sales: Sin Par Automotive Div.
Singer Products Co.
15 Moore St., New York 14, N. Y.

BW
CENTURY GAS EQUIPMENT
Marvel-Schebler Products Div.
Borg-Warner Corporation
Decatur, Illinois



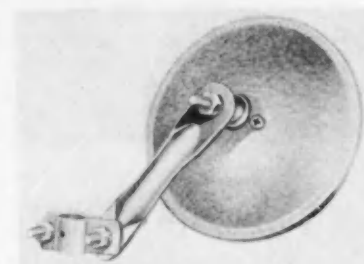
Truck fire extinguisher Model 2½B is a dry chemical unit said to meet ICC requirements for interstate truck equipment. Made by American LaFrance, Elmira, N. Y.,



it's rated 4B:C, weighs only five lb. It comes equipped with a pressure gage and speed-action bracket for in-cab mounting.

More details? Circle 383 on reply card

Blindspot truck mirror just added to Auto Lamp's "Pathfinder" line is designated Catalog No. 3553. Unit features a "diminishing"



glass mounted on 5-in. round frame. Bracket fits any standard bracket arm, company says.

More details? Circle 384 on reply card

Tractor air cushion takes the bounce out of bobtailing, says maker Auto Transport Mfg. Co., Fresno, Cal. The Bonnin Model 600B raises rear axle five in. to put all dead

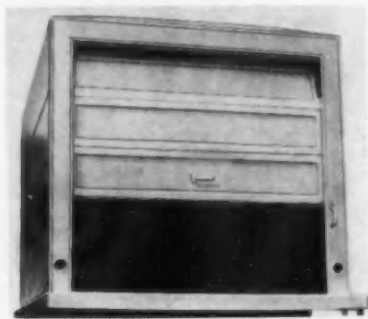


weight on drive axle. This cuts bounce and tire wear. Added braking power keeps truck and tandem in line in emergency stops. In-cab controls

permit quick adjustment to meet any road conditions. Full air pressure lifts tag wheels off ground for easier hookup.

More details? Circle 385 on reply card

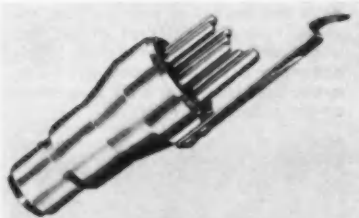
Aluminum roll-up truck door with double spring suspension is offered by Van/Guard Truck Door Div., New London, Conn. Special operating mechanism permits door to fit flush under roof bows when open. Two



models are available: AEX, with extruded frame sections and aluminum-faced plywood panels, and APW of smooth aluminum-faced resin-sealed board.

More details? Circle 386 on reply card

Tractor-Trailer wiring adaptor is for seven-wire tractors pulling six-wire trailers. Baker Mfg. Co., Marine City, Mich., says it fits existing plugs and receptacles and meets ICC re-



quirements. Adaptor body is die-cast zinc with tin-plated brass contact pins and brass receptacles. Internal wiring is sealed against weather, dirt and dust.

More details? Circle 387 on reply card

Air-conditioner refrigerant is now offered in three no-deposit canister sizes by Union Carbide Co. The three sizes (1½, 2 and 2½ lb) of Prestone R-12 Refrigerant are for convenient servicing of any vehicle air conditioner without need for previous large cylinders requiring return deposit on purchase.

More details? Circle 388 on reply card

New diesel oil filter made by J. A. Baldwin Mfg. Co., Kearney, Neb., is said to last 50 per cent longer, also keep diesel oil visibly and chemically clean. Maker says its new Vac-Cel filters are backed by an unconditional money-back guarantee.

More details? Circle 389 on reply card

Rocker arm lubricator kits offered by Wohlert Corp., Lansing, Mich., contain oil valve regulator and adapter for installation with-

out machining or drilling. Lines run between oil filter and rocker arm cover to provide direct lubrication. Kits are available for Chevrolet 6-cyl, 1953-61 models and Ford 6-cyl, 1952-59 or V-8, 1954-61 models.

More details? Circle 390 on reply card

Truck brake drum for extra-heavy-duty applications is the latest model "Centrifuse" drum from Motor Wheel Corp., Lansing, Mich. The 16½-in. drum features 12

(TURN TO NEXT PAGE, PLEASE)



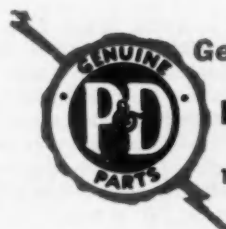
proof that your motors have had a

P&D-IZE

IGNITION TUNE-UP!

Good ignition makes the difference — and P&D parts means good ignition — help keep your fleet on the road — *earning!* That's why more and more truck, bus and tractor owners are P&D-izing — *regular* ignition tune-ups for every vehicle — *regular* replacement with genuine P&D parts, warranted on every job.

P&D ignition parts are made to stand up under the toughest conditions, in all weather, on all roads, on start-and-stop or long hauls for that money saving, money earning Mileage with a capital "M".



Get the P&D-ize habit — it pays!

P&D MANUFACTURING CO., INC.

STARTING - LIGHTING - IGNITION

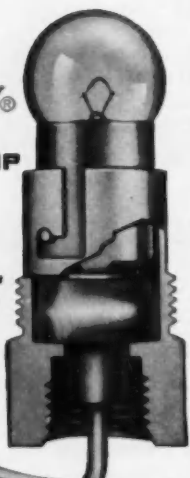
19-02 STEINWAY ST., LONG ISLAND CITY 5, N. Y.

Export Sales: Borg Warner International, 36 So. Wabash Ave., Chicago 3, Ill.



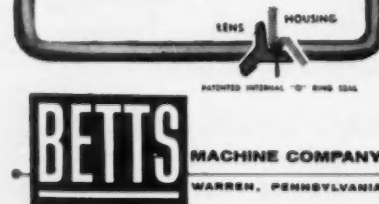
with the
Snap Seal[®]
SAFETY LAMP

shock
absorber



Stop being "robbed" of profits. All Betts safety lamps have rubber-supported bulbs . . . cushioned to greatly extend bulb life . . . you don't have to ask for it! Betts is never satisfied with anything short of uncompromising quality . . . guess that's why "Snap Seal" lamps are so popular . . .

a complete line of "O" ring snap seal lamps



More details? Circle 262 on reply card

148

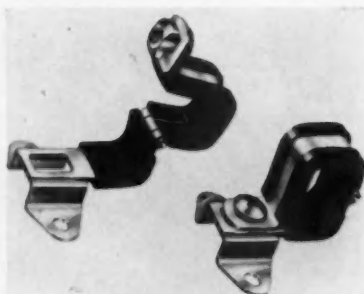


vehicle accessories

Continued from Page 147

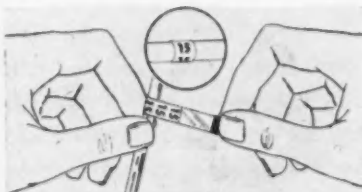
lb of added iron in the inner surface and a special air scoop for better heat dissipation. This is said to give longer lining and drum life. More details? Circle 391 on reply card

Truck wiring fastener called Flip-Loc is offered in square and rectangular shapes by TA Mfg. Corp., Los Angeles, Cal. It has built-in hinges and a fast-action key nut



for installing them and taking up slack. Fastener can be permanently attached, is durable enough to withstand frequent opening and closing. More details? Circle 392 on reply card

Wire coding tape called E-Z Code provides permanent identification of all types of vehicle wiring. The transparent, self-adhering, self-laminating tape is offered by



Westline Products Division, Los Angeles, Cal. The vinyl marker is pre-coded in one area, then wrapped around itself to form a protective cover for the printed area. More details? Circle 393 on reply card

Flotation truck tire called the Turnpike Tread gives a softer ride, handles heavier loads, says maker Harro Tire & Rubber Co., Detroit. Featuring wider tread, the 18:50 x 20 permits rear single mounting to replace duals on single or tandem axles (it's comparable to (TURN TO PAGE 151, PLEASE)



PROVEN
for 30 years

to **REDUCE** maintenance,
operating costs and
extend engine life

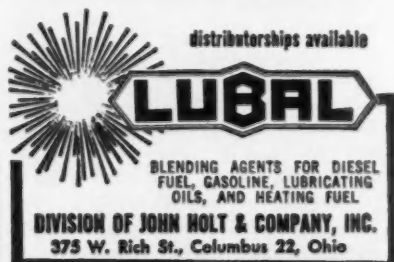
- STOPS CARBON BUILD-UP
- STOPS STICKING VALVES
- STOPS RING WEAR
- STOPS CORROSION
- STOPS SLUDGE AND VARNISH

LUBAL BLENDING AGENTS used in diesel fuel, gasoline and lubricating oil will minimize down time and excessive overhauls. They are specifically compounded to eliminate the causes of pre-ignition, remove carbon abrasives in the fire zone area, and thoroughly lubricate the critical upper cylinder area. Use LUBAL for bulk treatment or for individual engines.

**MONEY BACK
GUARANTEE**

USE LUBAL FOR 3 MOS.

Convince yourself . . . LUBAL will improve and increase gasoline and diesel engine performance . . . or your money back. Write for full details and **OUR NEW BROCHURE.**



More details? Circle 263 on reply card

COMMERCIAL CAR JOURNAL, May, 1961



Bend-Portland Truck Service records show . . .

TIMKEN® BEARING REPLACEMENT COST IS LESS THAN 1% OF TOTAL MAINTENANCE

A REAL trail blazer in Oregon truck transportation, Bend-Portland Truck Service Inc. had its beginnings in 1914 with one truck. Today their 81 trucks and 59 trailers haul general cargo over 1,600,000 miles a year on city, mountain and desert highways. Preventive maintenance and Timken® tapered roller bearings are important factors in holding down their operating costs. Mr. Wilfred E. Jossy, Bend-Portland President says: "Our Timken bearing replacements com-

prise only $\frac{3}{4}$ of 1% of the total dollars spent on *all* maintenance per year."

Thousands of fleet owners save money with Timken bearings. And like Bend-Portland, they buy Timken bearings on price. Not initial price—but *price per mile*. They know it isn't the price you pay for bearings that counts, it's the performance you get.

Timken bearings deliver outstanding performance because we maintain unmatched quality control in their

manufacture from start to finish.

When you need replacement bearings, specify what so many truck manufacturers do on original equipment—Timken tapered roller bearings. And send for free booklet that will help you get the most from your Timken bearings, "Fleet Owner Service Manual." The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO". Canadian Division: Canadian Timken, St. Thomas, Ontario.

**Lowest price per mile . . .
mile after mile after mile**

TIMKEN®
tapered roller bearings





Diamond T diesel Model 922DFN-SLHD

"Sweetest thing on the road," says Burleson It's Diamond T diesel 922D

THAT'S T. E. BURLESON speaking, of Waxahachie, Texas. And the "honey" he's talking about is his newest Diamond T—not the trailer load of 45,000 lbs. The lightweight twin-screw diesel picks up raw honey and hauls it to Burleson's plant where it's blended and bottled.

Economy isn't hard to take

On these runs, as well as on its high mileage 15-state "delivery route," the D-cab diesel turns in a cost-cutting 5½ m.p.g. with a gross weight of 72,000 lbs. Diamond T economy and long life is an old story with Burleson—some of his units are still going strong after the million-mile mark.

The rugged, welded-steel "D" cab is 72" wide, has stretch-out room to spare. Visibility is outstanding; the two curved windshields are of glare-absorbing "Solex" safety plate. Cab is insulated all around, has three dash-controlled ventilators.

All Diamond T's are custom-built

Five Cummins diesels, from 190 to 280 h.p., power this great diesel series. Options include 9 main transmissions, 4 auxiliary transmissions, 4 series of rear axles, 10 models of tandems and a choice of three front axle positions.

See your Diamond T dealer soon—see how much more you get with a custom-built Diamond T!

DIAMOND T TRUCKS

Established 1905



***The Diamond
is for Quality***



vehicle accessories

Continued from Page 148

two 8:00 x 20 tires). The 15:40 x 20 is for front wheels. The two sizes are said to replace all 8:25 through 11:00 x 20 conventional tires without



exceeding legal width. A softer ride for fragile cargo results from low (55 psi) operating pressure. More details? Circle 394 on reply card

New trailer floor for Fruehauf Volume-Vans and platform units is available from Fruehauf Trailer Co., Detroit. The Unit Load floor speeds up fork-lift loading and unloading of palletless cargo. For



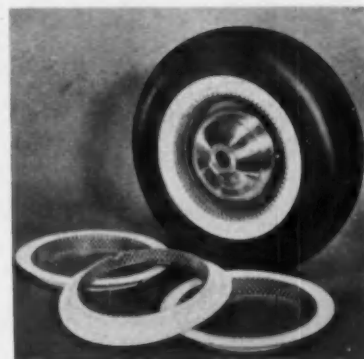
use with multiple-fork lift truck, the aluminum floor has 2 $\frac{1}{2}$ -in. grooves. These mate with truck tines to form a solid base on which to rest the load. More details? Circle 395 on reply card

Combination safety lamp serves as junction box and stop, tail and license plate light. The new Warren "Snap Seal" Model No. B-56JL lamp has just been introduced by Betts Machine Co., Warren, Pa. More details? Circle 396 on reply card

Truck-body hoists in two new models (77354HL and 77372HL) are just added to the line

of Twin Telescopic Hi-Lift hydraulic hoist line from Perfection Steel Body Co. Both have capacity of 12,000 lb and may be converted to end dumpers. More details? Circle 397 on reply card

Trim for both wheels and tires is available with "Spats" made by Aske-Wood, Inc., Detroit. With a single installation, you can improve appearance of your fleet's vehicles with white sidewalls and stainless steel on nickel wheel covers. For all trucks and passenger cars with 13-, 14- or 15-in. wheels, they're for use with standard black sidewall tires. Maker claims "Spats" will hold tight



to the tire at high speeds, also resist damage from curb scuffing.

More details? Circle 398 on reply card

TORQUE WRENCHES



This Mark* Guarantees:

1. Guaranteed accurate forever within 2% of maximum scale reading.
2. The only wrench that permits accurate use of adapter & extensions. Patented pivoted handle permits concentrated load position—the only way to obtain accuracy with adapters and extensions.
3. Rugged construction. Can be stored in a tool box with other tools.
4. Easy to use as any socket wrench.
5. Signalling models and direct reading styles to choose from.
6. A complete range to choose from to meet every service application.

*These are the same torque wrenches used and recommended by leading engine and equipment builders.



Valve and Clutch Spring Tester

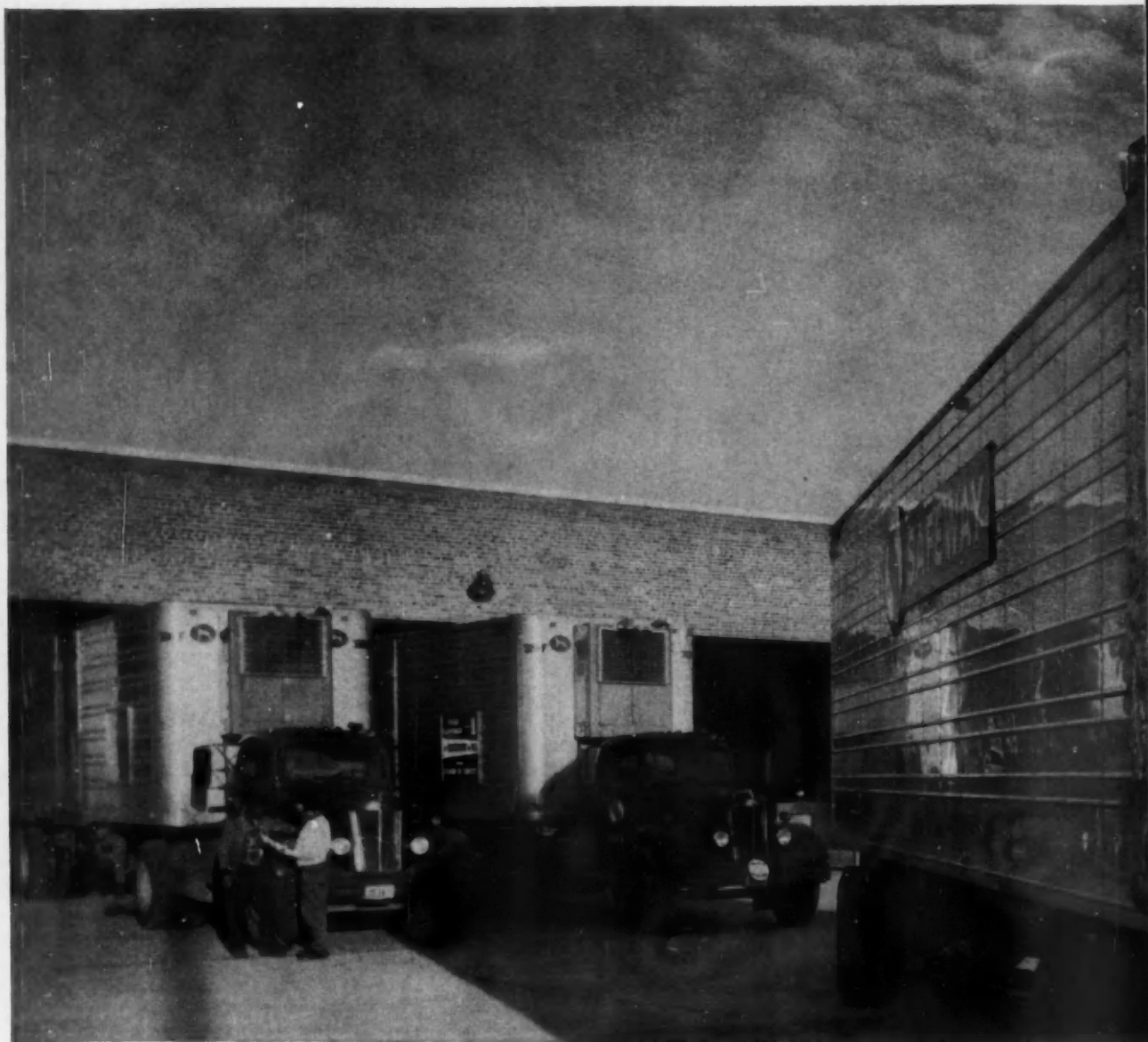
Test new as well as used springs. Match sets of valve springs for top engine performance. Check clutch springs to prolong clutch life.

FREE

Torque Specification Book for over 130 makes and more than 1200 models of automobiles, (U.S. and foreign) trucks, tractors, outboards, motorcycles, diesel, aircraft, marine and small air cooled engines. Spark plug, wheel bearing, valve spring data and many helpful torque tips sent free upon request, write Dept. 60J.



PA **STURTEVANT CO.**
ADDISON **QUALITY** ILLINOIS



GREAT DANE'S PRESIDENT REPORTS:

"Alcoa reefer flooring means



Alcoa® Aluminum flooring is stronger, lighter, watertight... yet costs no more!

"Safeway's short hauls with modern, palletized, lift-truck loading inflict more torture on a trailer floor in a day than a month's usage on longer hauls," says President Christopher Hammond, Jr., of Great Dane Trailers, Savannah, Ga. "We had to use a floor which would give long service under these conditions... and we paid no extra from Alcoa. Now it's standard for all our refrigerated vans."

Cold facts sold Great Dane on Alcoa

reefer flooring! The design has been engineered for high beam strength using Alcoa Alloy 6063, making it as much as 30 per cent tougher than competitive systems. Improved Alcoa reefer flooring stands lift-truck loading better, yet weighs as much as 10 per cent less for extra pounds of payload. There's up to 25 per cent more air circulation, too, protecting perishables with little chance of "hot spots."

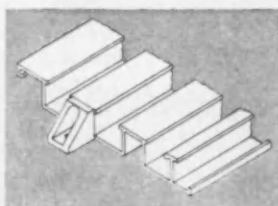
Hinge-type joints fit fast and watertight,



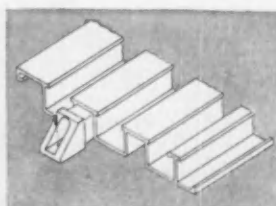
extra value in 10 new Safeway vans"

keep condensate out of insulation. Concealed fasteners can't trap dirt or moisture. Just five basic extruded shapes will floor any width trailer from 82 to 90 in. Installation is easily accomplished.

Refrigerated trailers equipped with Alcoa extruded flooring are available today from most trailer manufacturers. Any Alcoa warehouse distributor stocks it. For technical help, call your Alcoa sales office. For FREE brochure, Alcoa Extruded Aluminum Flooring, write: Aluminum Company of America, 1785-E Alcoa Building, Pittsburgh 19, Pa.



Molded Rubber Flooring End Plugs
— Speed installation, stay tight without fasteners, cut plug costs.



Cast Aluminum Flooring End Plugs
— Fit easily and snugly front or back; for either installation method.



ALCOA ALUMINUM

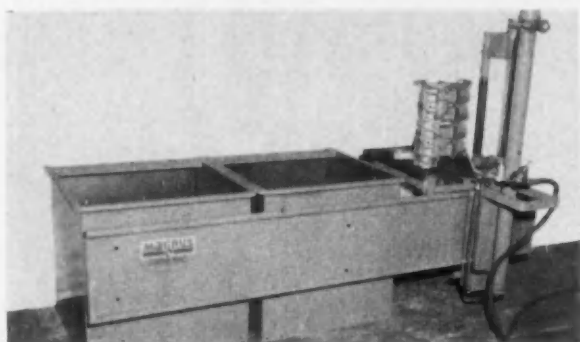
ALUMINUM COMPANY OF AMERICA



in shop equipment

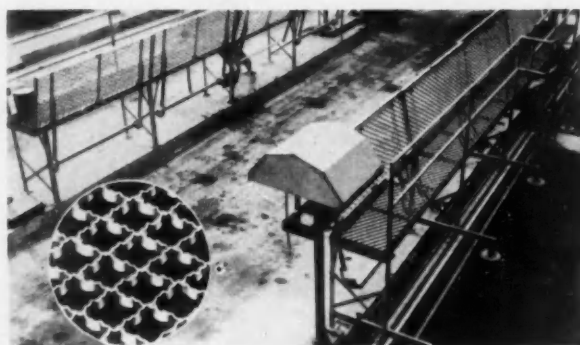
It's easy to get more details about the items described.

Just fold out and use free reply cards inside back cover

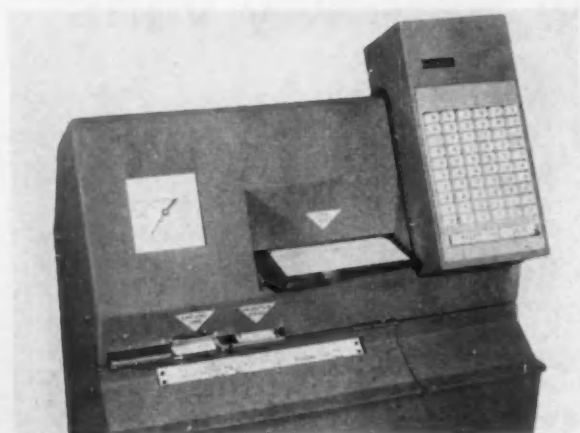


Multi-tank cleaning of heavy parts is handled without manual lifting or overhead hoist with the new Porto Lif "tramway" from Magnus Chemical Co., Garwood, N. J. The 75-lb capacity unit is pneumatically-operated, lever-controlled and provides agitation of 100-140 up-and-down motions per min for cleaning. In use, work to be cleaned is loaded on platform at floor level, pneumatically-raised to position over the first tank, then lowered into cleaning solution for agitation. Platform is then raised from solution and rolled to next tank for agitated rinse.

More details? Circle 455 on reply card inside back cover



Special catwalk for cleaning oil trucks was designed by Bustin Steel Products, Inc., Dover, N. J. It features a series of counterbalanced, non-slip platforms that are hinged to and extend from the catwalk. As the maintenance man steps onto the platform from the catwalk, platform drops to level position to permit worker to walk out to work on the truck. The counterbalance automatically lifts the platform out of the way when no one is on it. Platforms, catwalks and steps provide all-weather safe footing due to construction of Bustin's sturdy "Protecto-way" steel grating (see inset in photo). More details? Circle 456 on reply card inside back cover



Effective cost control in any fleet operation involves complete, accurate and up-to-date record keeping. This is not only time consuming, but is often subject to human error and omission. The new Stan-recorder from Standard Register Co. is said to present a basically complete, automatic system for data recording. The machine provides information on two separate forms. One is a visual record for human reference. The other is for use with electronic data processing equipment.

Some fleet records it will maintain include:

- Vehicle use, mileage, maintenance, repair and downtime, as well as parts replacement.
- Shop, equipment, terminal and office records.
- Inventory of parts, fuel, lube, other supplies.
- Customer orders, services, receipts, etc.
- Personnel time, job and productivity records.

Information is fed into the machine by identification and transaction/operation plates, prepunched accounting card, time clock mechanism and keyboard.

More details? Circle 457 on reply card inside back cover

Machine trouble detector is an electronic tester offered by Calhear Instruments Co., Los Angeles, Cal. The Model MT-1 is said to be a powerful, transistorized amplifier with earphone to pick up even faint vibration or sound. The pocket-sized instrument is battery-operated.
More details? Circle 399 on reply card

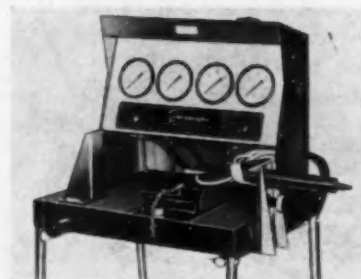
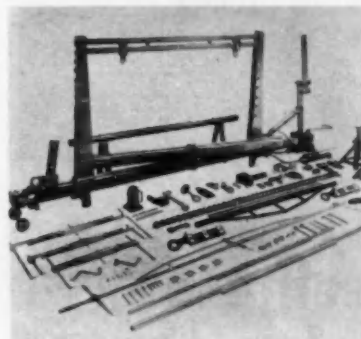
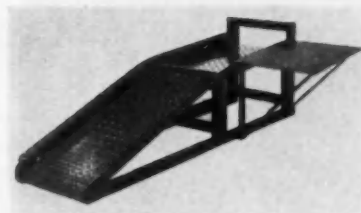
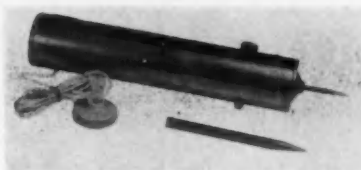
Magnetic base lights take the "trouble" out of trouble lighting. A series of the new units has just been introduced by Standard Portable Cord Co., Mayville, N. Y. A powerful magnet holds the light to any ferrous metal surface. Shown here, it's attached to the underside of the hood to light the engine compartment.
More details? Circle 400 on reply card

Wheel ramps elevate vehicles with maximum load of 2000 lb per wheel. "Jiffy" ramps come in pairs, can be used for front or rear elevation. Just position them under wheels and drive on. They're from United Industries, Minneapolis, Minn.
More details? Circle 401 on reply card

Body frame aligner equipment from John Bean Division, Lansing, Mich., is said to perform most body and frame repairs on conventional construction cars. It's particularly effective for unitized bodies, says maker.
More details? Circle 402 on reply card

Brake lining wear can be quickly measured with Safe-T-Gage, a new instrument developed by Raybestos Division, Bridgeport, Conn. The caliper is said to be adjustable for determining amount of wear on bonded or riveted linings.
More details? Circle 403 on reply card

Power brake tester offered by Borroughs Tool and Equipment Corp., Kalamazoo, Mich., handles on-bench repair jobs. It's said to test power brake unit on the vehicle, diagnose trouble after unit is removed from vehicle, check specs on both vacuum and hydraulics after overhaul.
More details? Circle 404 on reply card



in descriptive
 free literature

Terminal radio equipment Bulletin No. ECR-431 is designed to show how mobile communication can improve your fleet operations, says General Electric Corp. The company's line of high-powered, 2-way systems is described with installation facts and cost comparison charts.
For free copy, circle 464 on card

Truck dispatching is said to be simplified with a visual control and scheduling board called Memo Flex. It's described in a booklet from Memo Flex Division, Dayton, Ohio.
For free copy, circle 465 on card

Drilling and tapping procedures for aluminum, magnesium, steel, thermoplastics and other plastics to receive Heli-Coil inserts are described in Bulletin No. 765 from Heli-Coil Corp., Danbury, Conn.
For free copy, circle 466 on card

Body and frame repair equipment in the Porto-Power line is shown in Catalog No. P-52 from Blackhawk Automotive Division, Milwaukee, Wis.
For free copy, circle 467 on card

Set screws and their three important holding powers when properly tightened are analyzed in an 8-page technical bulletin (Form No. 2067) from Standard Pressed Steel Co., Jenkintown, Pa.
For free copy, circle 468 on card

Steam cleaning equipment from Malsbary Mfg. Co., Oakland, Cal., is compared according to user's needs in a new comic-style booklet.
For free copy, circle 469 on card

Portable sandblaster called Handi-Blast (Model No. 28A) is described in a brochure from the maker, Hamill Mfg. Co., Washington, Mich. The compact, air-operated unit is said to quickly remove rust, paint, scale, etc., from metal or masonry, also etches metals.
For free copy, circle 482 on card

Pinion seal installation tool from Chicago Rawhide Mfg. Co., Elgin, Ill., is described in Bulletin No. 3T. The new tool is said to be specially designed to fit around pinion shafts, has seven adaptors for cars and light trucks.
For free copy, circle 483 on card

THERE'S MORE



in shop equipment

Continued from Page 155

New fire retardant coating called Flame-Tec is also heat insulating. Kansas Paint & Color Co., Wichita, Kan., says, when the paint is attacked by flame or excessive heat, two actions take place to help fight fire. First, it produces incombustible gases to smother flame. Then, it bubbles-up to form a thick layer of in-

sulating foam. The coating may be applied with brush or roller over new surface or old finish.

More details? Circle 405 on reply card

"Jet-clean" gasoline is dispensed from standard pumps using new Fuel-Card filter, says maker

Warner Lewis Co., Tulsa, Okla. The unit is installed on the pump, next to the hose, to filter out all water and foreign particles accumulated from storage tanks and fuel lines. Gasoline or diesel fuel is said to be cleaned to same standards set for jet fuels.

More details? Circle 406 on reply card

New transmission jack from Blackhawk Automotive Division, Milwaukee, Wis., is the Model No. T-6. It's for under-hoist or in-pit work on truck and bus transmissions, clutches and differentials. Unit has



save yourself the cost of road trouble

L. B. Dial of Ryder Truck Rental Inc. says: "It has been our experience that if the cooling systems of vehicles had been pressure-tested before going out of the shop, a minimum of 75% of road failures would have been prevented." Now is the time to get a **Stant**

ST-255 Universal Cooling System and Cap Tester.

Before hot weather complicates matters, pressure-test the cooling system of every unit. Take the guess-work out of cooling system maintenance. When you buy the Tester, replenish your caps.

STANT MANUFACTURING CO., INC.
Connersville, Indiana

Used on America's Finest Automobiles as
Standard Equipment for a generation



Lev-R-Vet
Safety Cap



lifting height of 71 3/4 in. and 2000-lb capacity. Saddle tilts 55 deg forward, 20 deg back and 12 deg to either side. Jack is foot-operated through a 2-stage release valve.

More details? Circle 407 on reply card

Hydraulic cylinders in a new YDS series are offered by Owatonna Tool Co., Owatonna, Minn. The double-acting cylinders with choice of stroke length are available in bore sizes of 1 1/2, 2 and 2 1/2 in. with "push" capacities of 8, 15 and 25 tons at 10,000 psi, for occasional use. Continuous duty is not recommended beyond 3000 psi.

More details? Circle 408 on reply card

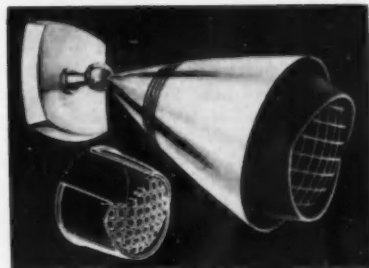
Oil film remover called Slix is said to eliminate fire and slip hazards of spilled oil and gasoline. The Penetone Co., Tenaflly, N. J., makes the new non-flammable, non-toxic, odorless chemical product. It breaks up oil slicks and removes flammable solvents from almost any surface, says maker.

More details? Circle 409 on reply card

Trailer slide lubricant eliminates problem of frozen and rusted tandem slides. Graphoil (spray lube) frees the slides and retards grime and rust, according to Kano Laboratories, Nashville, Tenn.

More details? Circle 410 on reply card

No-glare floodlight louver has a 45-deg cutoff from any angle to eliminate offensive brightness. Stonco Electric Products, Kenilworth, N. J.,

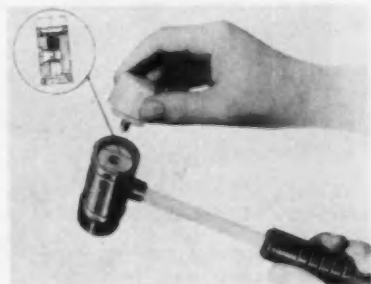


says it fits all outdoor lighting bullets using standard PAR-38 or R-40 medium-base reflector lamps.
More details? Circle 411 on reply card

Wheel aligner rack for passenger car fleets permits complete wheel alignment in the space of a single service stall, says maker John Bean Division, Lansing, Mich. The new Lift-A-Matic unit has an air-lift rack with overall length of 15 ft, 10 in. Runways adjust for 40 to 68-in. tread widths. It takes up to 136-in. wheelbase vehicles, weighing up to 6000 lb, at 150-lb air pressure.
More details? Circle 412 on reply card

Automotive air tool kit offered by Aro Equipment Corp., Bryan, Ohio, contains eight lightweight, durable tools with wrenches and adaptors. These include a 4500-rpm, right-angle motor assembly for sanding; 1900-rpm, right-angle motor assembly for polisher, wire brush, hole saw and drill; 18,000-rpm, short grinder for grinding and rotary filing and a blow gun for dusting.
More details? Circle 413 on reply card

Soft-faced hammers for industrial use have several safety features. New Plastic Corp., Los Angeles, Cal., says they eliminate thread stripping, broken or loose handles, and heads flying off. Fiber glass handles have polyethylene grips bonded to non-sparking heads with epoxy



resin. Hammers are offered in 28 sizes from four oz to 20 lb. Faces are interchangeable.
More details? Circle 414 on reply card

Battery carrier called Corner-Grip has two special hooks to grip opposite corners of the battery case. Bishman Mfg. Co., Osseo, Minn., says the weight of the battery locks the hooks in place. With the new carrier, you don't need to rely on posts for lifting. Strap and hooks are said to be acid and oil resistant.

Mobile air compressor is a new all-purpose, 2-cyl, heavy-duty, portable model from Campbell-Hausfield Co., Harrison, Ohio. Available with either 1-hp or 3-hp motor, units in the QR Series are said to provide working pressure of 100 lb in continuous operation and 150 lb intermittent.

More details? Circle 415 on reply card

U-joint servicing tool called Pullzit is said to do the complete job of disassembling and assembling without hammering. To lubricate (TURN TO NEXT PAGE, PLEASE)



THIS NEW STAR SALESMAN WILL WORK FOR HALF PAY!

The Mercedes-Benz L 319 diesel van is now introduced into the United States. Even this brief statement tells the knowledgeable that they can expect to save at least one-half of their current gasoline van operational costs. Such savings in fuel, maintenance and repair charges are routine with diesels. And, when the diesel is made to the exacting standards of perfection of Mercedes-Benz, significantly greater economies under either moving or idling conditions can be expected.

The world-famous Mercedes-Benz star on your new L 319 assures you the tireless services of a moving salesman whose maintenance is minimal, yet who immediately earns the respectful attention of every client he—and you—serve.

To your surprise, you'll find this amazing diesel vehicle of 2-ton capacity priced far below expectations. For a detailed catalog write to W. L. Swarm, Sales Manager Truck and Bus Div., Mercedes-Benz Sales, Inc., South Bend 27, Indiana.

MERCEDES-BENZ SALES, INC.

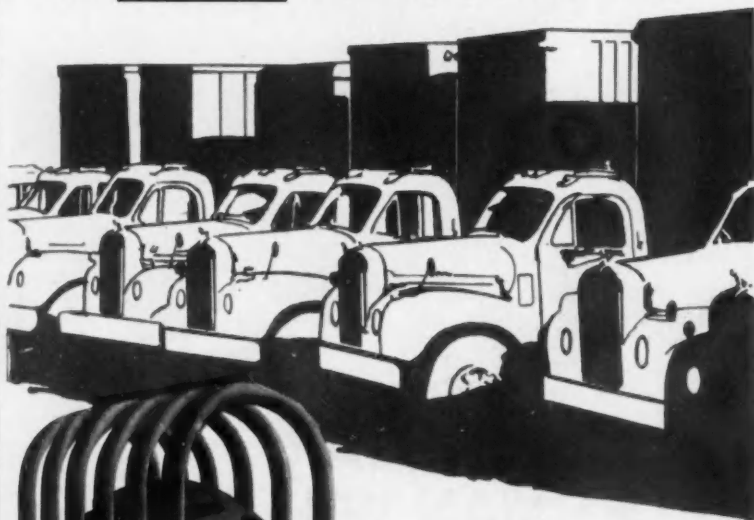




That's About the Size of It!

Side by side are shown the largest and the smallest vehicles on exhibit at a recent commercial motor show in London, England. The Goggomobil pickup truck is dwarfed by the 300-hp Thorneycroft "Sandmaster."

Give Your Shop **LIFE . . . ACCIDENT**
and **HEALTH** Insurance Forever . . .



Branick
STEEL

TRUCK TIRE SAFETY INFLATION CAGE

IMPROPERLY MOUNTED OR DEFECTIVE LOCK RINGS
WHEN BLOW-OFF CAN CAUSE SERIOUS OR FATAL
ACCIDENTS . . . BUY THIS PROTECTION NOW!

- Mounted tires easily rolled into Branick Safety Cage.
- Strong 2" welded steel pipe insures complete protection.
- Handles 14.00 x 24" truck tires.
- Larger truck tires can be leaned against cage . . . operator inflating tire from inside safety cage.

WRITE FOR COMPLETE DETAILS

\$110⁰⁰

F.O.B. FACTORY

BRANICK PRODUCTS CO. FARGO, NORTH DAKOTA



in shop equipment

Continued from page 157

cate the U-joint, just turn the screw to press out the trunnion joint from one side. The tool's special collet grips the projecting cup tightly and pulls it from the yoke. It's also said to



push the cup in quickly and evenly on reassembly without damage to bearing. The new tool is made by U-Joint Tool Co., Monterey Park, Cal.

More details? Circle 442 on reply card

Polarity protector attaches to any battery charger to give positive protection to alternator systems in 1961 cars and trucks. The



compact Marquette polarity protector is said to attach easily to charger for

Imperial LeBaron

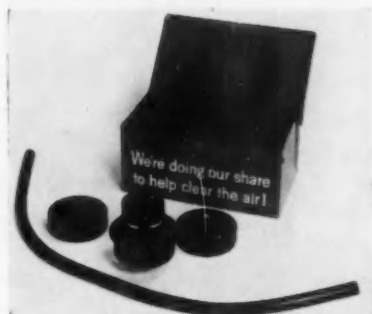
The 1961 version of the Imperial LeBaron, Chrysler Corporation's most expensive and luxurious automobile is now on display in dealer showrooms. Its 802-sq-in. rear window is said to be the smallest in any standard-size American car. The town-car-style rear window is for greater rear-seat privacy. Luxurious interiors are featured. Standard powered equipment includes electrically operated vent windows, window lifts and seat.



safe charging of 6- or 12-volt battery without damage to alternator wiring harness and diodes.

More details? Circle 443 on reply card

Test device
for positive crankcase ventilation systems is now available from AC Spark Plug Div., General Motors Corp.,



Flint, Mich. It's said to check crankcase ventilation by measuring air circulation through the system at engine idle.

More details? Circle 444 on reply card

O-ring size gage
is a new visual type said to permit user to check diameter and cross section of O rings without manual or



mechanical measuring. The easy-to-use unit is offered by Parker Seal Co., Culver City, Cal.

More details? Circle 445 on reply card

COMMERCIAL CAR JOURNAL, May, 1961

NEW FROM KIDDE! LOW-PRICED HIGH-POWER EXTINGUISHER

I.C.C. APPROVED



\$11⁹⁵
RETAIL

14" HIGH

Now—thanks to the new I.C.C. and U.L.-approved Kidde Kompact, you can have high-power fire protection at a rock-bottom price! Lowest-priced 2½-pound dry chemical extinguisher on the market, the new Kidde Kompact packs as much fire-killing punch as extinguishers costing twice as much. And with a U.L. rating of 4:B, C for use on flammable liquid or electrical fires, the Kidde Kompact equals 8 1-qt. carbon tets! Mounts snugly, works simply—just lift handle and press lever. No recharging needed—just replace used cylinder with another . . . only \$3.95. For more information, contact your distributor or write Kidde today!

Kidde 

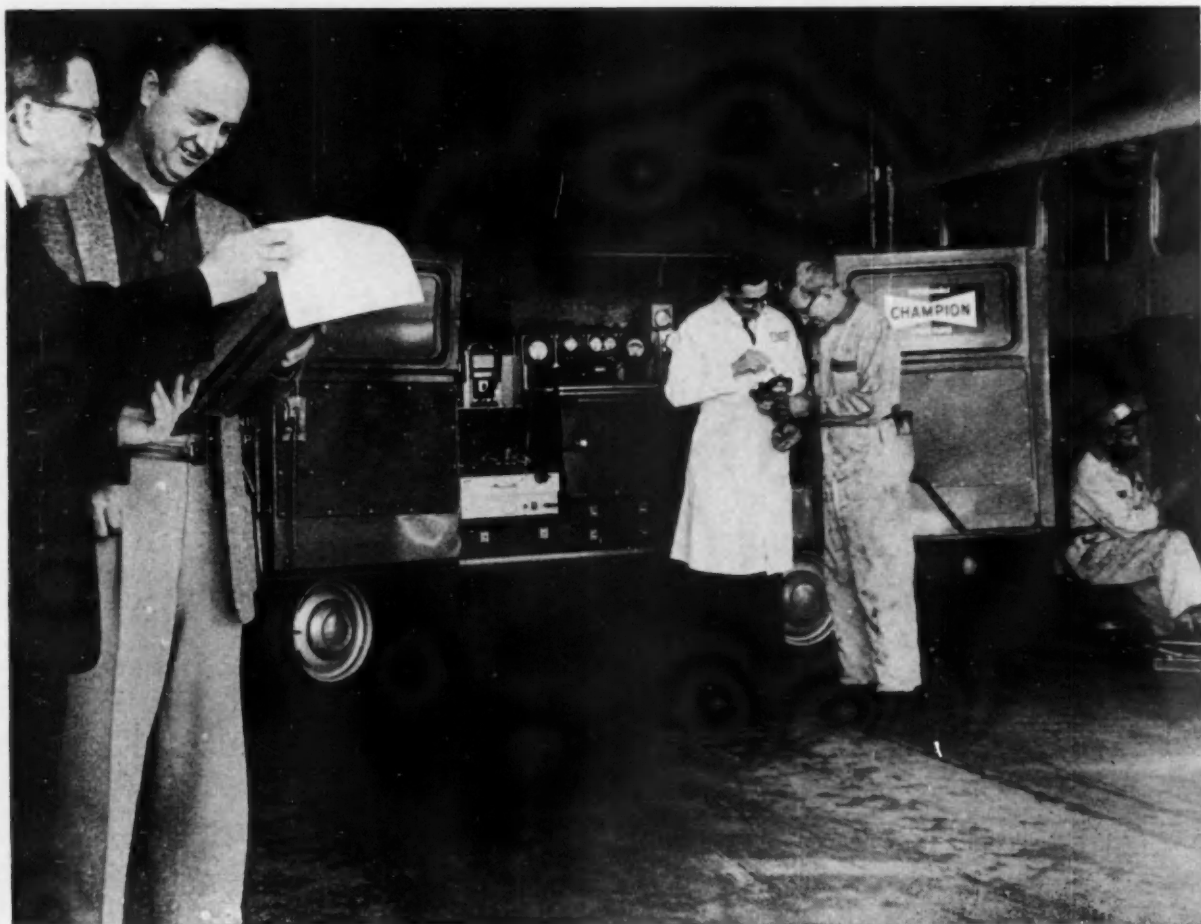
Industrial and Marine Division
Walter Kidde & Company, Inc.
512 Main St., Belleville 9, N. J.
Walter Kidde & Company of Canada Ltd.
Montreal - Toronto - Vancouver

More details? Circle 181 on reply card inside back cover

159

FOR A MORE DEPENDABLE,

Let this Champion "know



**EXCLUSIVE TECHNICAL ASSISTANCE helps you improve engine efficiency
and reduce operating expenses!**

Only Champion has "mobile service laboratories" to bring up-to-the-minute ignition "know how" right to your fleet. Manned by highly skilled Champion field engineers, these technical labs contain the latest scientific equipment to help you correct ignition troubles and get the most efficient engine performance from all your vehicles.

To build fleet efficiency, put this exclusive technical assistance to work for you. Call your Champion Representative or supplier, or write Technical Services Department, Champion Spark Plug Company, Toledo 1, Ohio.



CHAMPION SPARK PLUG COMPANY

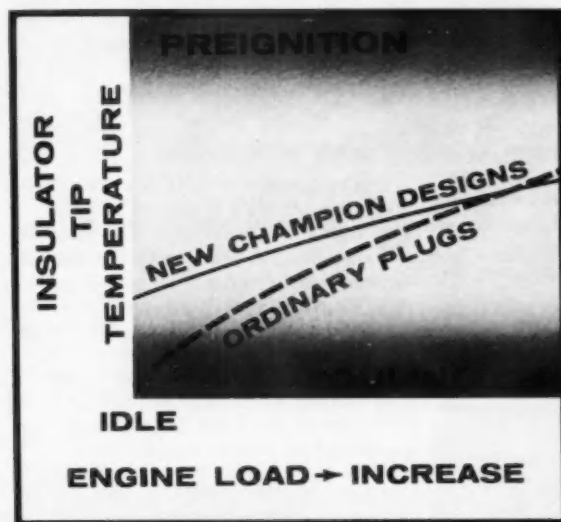
MORE PROFITABLE FLEET OPERATION...

how "go to work for you



SPECIFIC ENGINE DESIGN helps you get peak power and economy from every make and model of engine!

Champion designs a specific spark plug to meet the specific requirements of every make and model of engine. With Champions you get maximum engine performance, top economy and longest plug life.



WIDER PLUG-OPERATING RANGE helps you get top performance under every driving condition!

As this graph shows, Champions run hotter in the low power range to fight fouling, and cooler at peak engine loads to protect against preignition. This wider operating range assures you of top performance under every driving condition.

TOLEDO 1, OHIO

HERE'S STILL MORE CHAMPION "KNOW HOW" THAT HELPS IMPROVE FLEET EFFICIENCY:

- **Auxiliary-gap plug types** help prevent fouling under stop-and-go and continued-idling driving conditions.
- **Special application plugs** help overcome specific operating problems, such as ignition interference in two-way, radio-equipped vehicles.
- **Easy-to-use service aids**, such as the Champion Plug-Scope, help cut labor costs and speed up time-consuming repairs.
- **Exclusive 5-rib insulator** reduces power-wasting flashover—helps you get easier and faster starting.
- **Product development and quality control** help you get maximum plug life, plus improved engine performance and economy.

CHAMPION

Service Tips

... For Improving Performance and Cutting Maintenance Costs

- Many truck valves are adjusted (and even replaced) without paying attention to rotator performance. Always observe rotator movement. Every valve lash adjustment should include a visual inspection of rotator action at moderate idle. Any rotators which do not appear to be functioning properly should be replaced.
- Don't put an alternator out of commission by accidentally grounding the outpost stud. This can cause destruction of the wiring harness and the alternator. Make certain the stud is well covered by the vinyl boot cover, or with electrician's plastic tape.

Brake performance rating

Continued from Page 119

furnish a brake system capable of giving adequate performance for any vehicle rated for a specific GVW. It will assure you that any new truck you buy will have brakes with sufficient power to stop safely when loaded to its recommended GVW. It will also assure you, if states adopt the proposed system, that your vehicles can be licensed in a state at

the GVW rating recommended by the manufacturer.

As a result of these tests, the joint AMA-TTMA committee has appointed a second task force. Its aim: To study all the data at hand on friction horsepower of engines, chassis friction, and rolling resistance. It will then try to come up with a relationship between GVW and normal chassis holding-back power, and braking power on downgrades.

The goal: To be able to reliably predict what a driver should do on any grade.

END

Please Resume Reading Page 120

SAFETY

Continued from Page 83

frequency rate is significant. It converts all accidents to a figure based on a million miles. Formerly, some accident rates were figured on 100,000 miles. This resulted in some extremely low decimal numbers which required conversion to the million-mile formula for some national statistics.

And accidents between two vehicles belonging to the same fleet will always count as two accidents under the new standards.

Passenger standards include definitions of "passenger," "passenger accidents," and "frequency rate" (based on the number of accidents per million or 100 million passengers carried).

An appendix is included—not actually part of the standard—to serve as a guide for fleet operators. Many interpretations and guides help eliminate certain types of vehicles, accidents, or persons from the accident.

While the standard for motor vehicle fleets is only one page long, the appendix occupies about three pages.

Fleet operators' confusion when the terms are applied to particularly bizarre accidents can be settled by the ASA's committee on interpretations.

Copies of the standards are available from American Standards Assn., Inc., 10 E. 40th St., New York 16, N. Y., for 80 cents each.

Alabamans set up fleet safety patrol

Alabama Council of Safety Supervisors, an arm of Alabama Trucking Assn., has established a cooperative safety patrol.

It will observe and report on actions of drivers employed by motor carriers. It is designed to supplement

the fleet manager's supervision of his equipment while on city streets or highways. The fleet operator will receive observation reports by mail—good ones as well as bad.

E. L. Colburn, safety supervisor of Jack Cole Co., has been named "Chief" of the patrol.

Cornell completes tire skid studies

Cornell Aeronautical Laboratory, Buffalo, N. Y., has released results of recent tire skid tests on wet pavements.

Cornell says the tests gave "the most complete data ever gathered on friction coefficients of highway surfaces."

Age of the highway surface, amount of traffic, temperatures and other conditions were taken into consideration. Test pavements were in 19 states across the country. More than 400 tests were conducted in an 18-mo. period. Some of the findings:

"Newer pavements offer better skid

resistance than older ones. Data shows that Portland Cement concrete surfaces have higher average friction coefficients than other types of pavements tested.

"Pavements show less skid resistance to vehicles traveling at higher speeds.

"Materials used in constructing pavements affect their skid resistance, as do the methods used to finish some surfaces.

"The average friction coefficient... was 0.43, about half of that which might be obtained from the same tires on the same roads if they were dry."

The tests were conducted by the laboratory's Vehicle Dynamics Dept. under sponsorship of Portland Cement Assn.

Safety Awards

Youngstown (Ohio) Transit Co.—17 bus drivers for perfect records.

Hall's Motor Transit Co., Harrisburg, Pa.—23 bus operators for no accidents in up to nine yrs.

Ringsby Truck Lines, Denver, Colo.—36 locally-based drivers for fleet's 1960 all-time low in accidents.

Inter-City Trucking Service, Detroit—Chester L. Rhoads, Michigan's 1961 Driver of the Year, for 32 yrs of accident-free commercial driving.

Rose City Transit Co., Portland, Ore.—226 bus operators with up to 11-yr records as of 1960.

Roadway Express, Akron, Ohio—1811 over-the-road drivers for 1960 safe-operating records of up to 22 yrs.

Central Truck Lines, Tampa, Fla.—42 men at 16 terminals for up to 19 yrs safe driving.

Pacific Motor Trucking Co., San Francisco, Cal.—1055 drivers from 21 terminals for up to 20-yr records as of 1960.

END

Please Resume Reading Page 85

Turnpike Safety



Oversized speedometers like this are mounted on safety cars driven by Pennsylvania Turnpike Commission personnel. The new safety aid is expected to reduce speeds of some turnpike drivers by permitting them to check their speed with that of the safety vehicle.

Even a balloon holds air
but a tire needs

TREAD



Extra-traction tread ALLSTATE RUGGED LUG

New rubber compound in tread and sidewalls resists cuts and chipping. Reinforced steel bead. Deep traction tread bonded to the undertread. Here's a heavy duty tire that digs in anywhere—on or off the road—delivers extra mileage with its thicker tread and lasts for recap after recap.

Cool-running tread ALLSTATE EXPRESS CARGO

Step-down vented shoulder design reduces tire-destroying heat build-up in long-distance highway hauling. Dura-Twist Thermo Set Nylon Cord resists heat, strengthens carcass. Extra-deep rib tread outperforms usual five-rib type. Skid-resistant siping works in four directions.

FREE →

TIRE TREAD DEPTH GAUGE

Keep track of one of your important assets—the tread on your tires. Use coupon below to send for free Allstate Truck Tire Tread Gauge today.

SEND
FOR FREE
GAUGE AND
INFORMATION
TODAY!



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PLEASE SEND
FREE Allstate
Truck Tire Tread
Gauge and free fold-
er on "The Allstate
Truck Tire Story."

Name _____
Title _____
Company _____
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City _____ Zone _____ State _____

New Liquid Cleaner **OAKITE 202**

Cleans everything . . . economically

A new, "use it everywhere" liquid detergent—Oakite 202—now offers the greatest convenience ever in cleaning. It goes into water solution quickly without waste . . . without fire hazard. You spray, mop or brush it on.

Oakite 202 forms a rich, sudsy solution that's packed with cleaning power. It cuts through road grime, grease, scuff marks—even caked-on bug deposits. Use it throughout the garage. It washes cars and trucks, whitens greasy garage floors and aprons, brightens tile walls and painted woodwork, makes soiled equipment shine. It's safe for any surface, including aluminum. It dries down without streaking.

But—best of all—Oakite 202 in mild solutions out-performs stronger solutions of other cleaners. This makes it a most economical material for garage use.

Ask your Oakite man for a convincing on-the-spot demonstration. Or send for free bulletin to Oakite Products, Inc., 52G Rector Street, New York 6, N. Y.



More details? Circle 184 on reply card inside back cover

164

Two-way radio makes possible single terminal operation

THE PROBLEM was an old one to Jack Baylor. A shipment needed *right now* was due from Cleveland; men and machines would be held up waiting for it if the truck didn't come soon. Baylor, purchaser for E. W. Bliss Co., Canton, Ohio, was in a tough spot, so he picked up the phone and asked the Cleveland Freight Lines to trace the shipment.

At the other end of the line, the dispatcher said, "Hold on while I find out where he is." Baylor waited. In less than a minute the dispatcher was back. "Traffic was tied up by an accident," he said. "The truck is pulling into your plant right now." Baylor peered through his venetian blinds down into the yard below, where he has a good view of the receiving dock. As the dispatcher had assured, the bright red and yellow rig was just rolling up to the gate.

A purchaser not accustomed to such service might scratch his head and wonder if the dispatcher had a crystal ball to keep such close control of a truck's whereabouts from 75 miles away. But Baylor knew how it was done. No crystal ball, but the next thing to it kept deliveries on time—two-way radio.

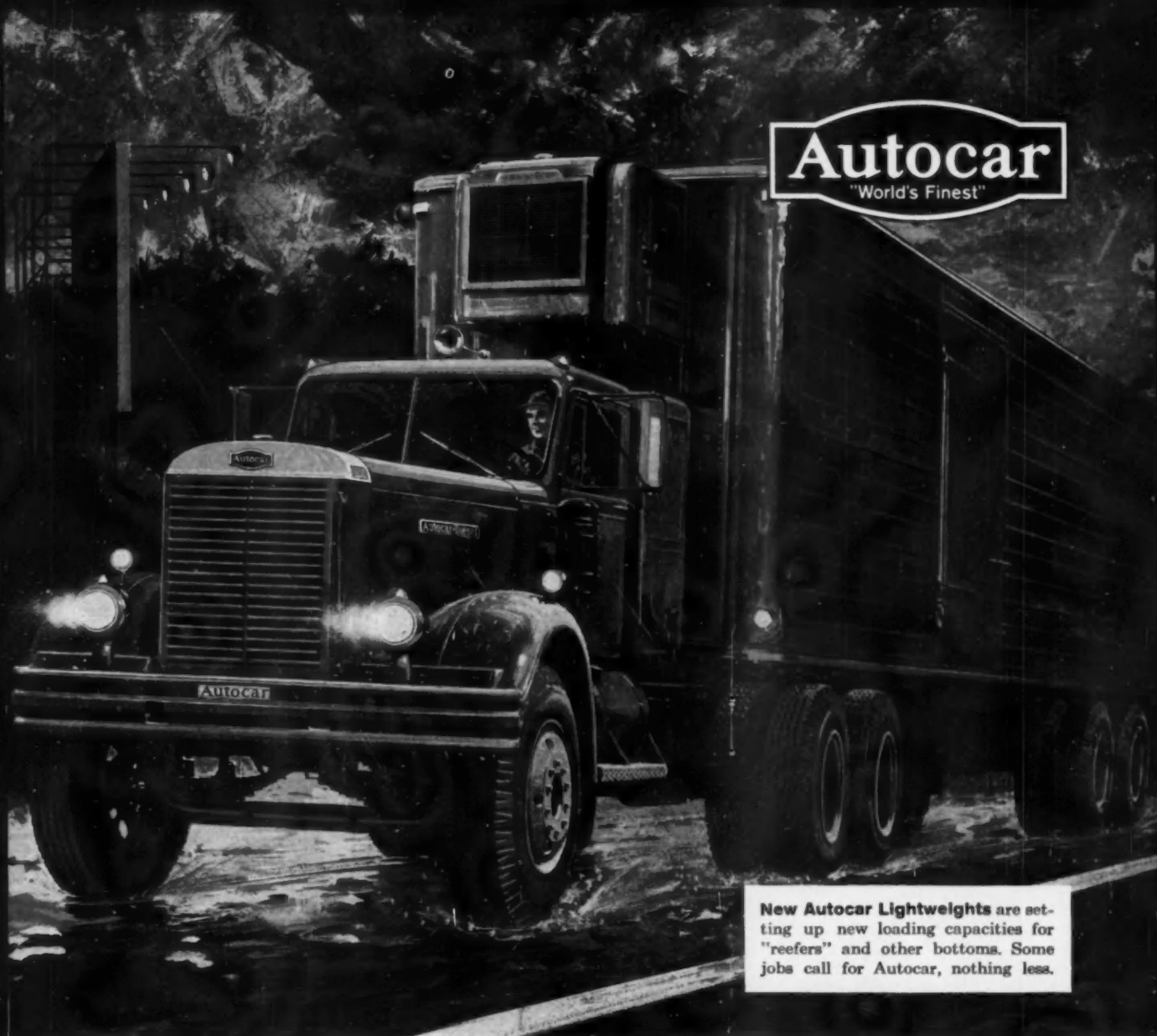
Cleveland Freight Lines hauls out of Cleveland to plants throughout northeast Ohio. It specializes in less-than-truckload shipments to industries in the dozens of cities within a 100-mile radius of Cleveland.

Key to CFL's precision deliveries is its single terminal. It has no other freight yards or terminals where shipments might be held up between Cleveland and the consignee's receiving dock. But working profitably out of just one terminal takes careful scheduling—even more careful control of trucks enroute. CFL couldn't do it without two-way radio.

Radio Corp. of America designed and installed CFL's system. The broadcast area assigned to the trucking firm by ICC is odd-shaped. It covers the cities and towns where most of the industry around Cleveland is concentrated. Exact coverage is controlled by the antenna system designed by RCA.



CFL drivers work on a profit-sharing plan, find mobile radio gives them more work—and consequently more money



New Autocar Lightweights are setting up new loading capacities for "reefers" and other bottoms. Some jobs call for Autocar, nothing less.

"Produce with Extra Profit" ... Autocar achievement

4475 extra pounds of perishables per trip! No wonder reefer operators are getting aboard the new Autocar "lightweights"—the "A" series models that cut up to 25% off chassis weight while retaining every ounce of strength and "go" power.

This A7564T diesel is virtually an all-aluminum structure from frame to roof of cab—yet it's rugged. All the economics are in its favor. Payload goes up, maintenance goes down—in true Autocar fashion. Per-ton-mile hauling costs are "flattened."

Hauling perishables or anything else, each Autocar is custom-engineered for its job and built the Autocar way for trouble-free performance. Why settle for less than the "World's Finest"? White-Autocar comprehensive service throughout U. S. A.



Division of
The White Motor Company
Exton, Pa.

More details? Circle 185 on reply card inside back cover

BUS FLEETS

Continued from Page 21

Already pending in Congress is the Urban Mass Transportation Act of 1961, sponsored by Sen. Harrison Williams (D., N. J.) and 16 other congressmen.

The bill would create a \$100-million loan fund to finance a study of metropolitan area commuter transportation problems. It would further set up \$75-million in grants for demonstration projects.

United States Chamber of Commerce, on the other hand, is pushing for a city-by-city attack on urban passenger transportation problems. It takes exception to

a blanket national approach. It would duplicate mass transportation studies already in progress in many cities, the C of C says.

Greyhound stays in black

Greyhound Corporation paid its stockholders \$1.64 per common share for the fourth quarter of 1960, based on a net income of \$21.8-million. It was almost a duplicate of 1959's net.

Bus operating revenues rose from \$285.9-million in 1959 to \$287.1-million in 1960. Other Greyhound ventures accounted for \$38.5-million. Total revenues for the system amounted to \$325.5-million, up from 1959's \$323.3-million.

END

Please Resume Reading Page 25

For Ellis Truck Lines...

Doing Our Own Dillelectric Tube Repairing Cut Costs Over 50%

...and reduced tube inventory



James D. Holland, Memphis Shop Superintendent for Ellis Truck Lines, proved the tube repair cost figures shown at the right. His labor was figured at \$2.50 per hour. "With the use of the Dillelectric Clamp, we get a perfect electrical vulcanization every time.

"Another source of savings was our ability to cut tube inventory. Since our contract service was on a seven day basis, we had to carry enough extra tubes to fill in this period. Now we can pull a tire, patch the tube and put it back in service in minutes. In these days of inventory pressure from the

front office, this has been important."

For the safest, most economical truck tire repair — either tube-type or tubeless — try Dillelectric. You will save money and time. (For other case histories, send for Dill brochure 1362.)

SEND-OUT COSTS

Dismount Tire	\$.28
Per Patch (contract) . . .	1.50
	\$1.78

DO-IT-OURSELF COSTS

Dismount Tire	\$.28
Patch. . . . .	.11½
Electricity . . . . .	.01
Patch labor. . . . .	.28
	\$.68½

DILL®

Manufacturing Company
Cleveland 3, Ohio

Other offices in Los Angeles, Akron and Toronto

FLEET CARS

Continued from Page 17

Budd moves automotive division to Detroit

The Budd Co., Philadelphia, has moved the divisional headquarters of Budd Automotive from Philadelphia to Detroit. The firm's reasons: To be nearer the auto manufacturers it supplies, cut costs. The parent company remains in Philadelphia.

Hanway named to Chrysler fleet sales executive post

W. C. Hanway, Jr., has been appointed assistant director of fleet sales by Chrysler Motors Corp. He was formerly in charge of truck sales activities for the Dodge Div.

Industry hunts ways to get mechanics

An automotive industry study group has been named to recommend a program for coordinating efforts to attract, train and retain qualified automobile mechanics. Representatives from automotive and manufacturing associations, and Dept. of Labor met in Detroit recently at the invitation of The Electric Autolite Co.

First Cadillac 'compact'?

Cadillac Motor Car Div. has introduced a new model—a "small" one—called the Town Sedan. The company says it is "identical to the Sedan de Ville in all interior comfort dimensions—head room, leg room, chair height and over-all width." Only it's seven in. shorter than its big brother—215 in. as compared to the Sedan de Ville's 222 in.

END

Please Resume Reading Page 21



This mark tells you a product is made of modern, dependable Steel.



Mr. William Stark, President, Penn Overall Supply Company, Pittsburgh, Pa.

Hears speech on "Penicillin" steels . . . buys truck bodies made of Cor-Ten Steel

Here is the story of how one of the largest industrial laundries in the East came to specify USS COR-TEN High-Strength Low-Alloy Steel for its truck bodies.

Mr. William Stark, President of the Penn Overall Supply Company, Pittsburgh, heard an address in Detroit on *Our "Penicillin" Steels**. The gist of this speech was that these new steels are good for our economic health. It described many of the steels which have been proved in the laboratory and on the job.

One of them, USS COR-TEN Brand Steel, has proved to be the best material yet developed for lightweight, corrosion resisting truck bodies. It withstands shocks, twists and strains of rough service and its surface holds paint considerably longer than carbon steel.

Mr. Stark thought COR-TEN Steel might be just the material for his laundry trucks. He found that he could reduce the weight of his present trucks by about 700 pounds. Operating and maintenance costs would be lower and he could haul more payload!

The Boyertown Auto Body Works, Boyertown, Pa., was already building similar truck bodies of USS COR-TEN Steel that were noted for their ability to take a battering and resist denting throughout their long service life. Penn Overall ordered several of the Boyertown S10H models and Mr. Stark expects them to last considerably longer than his previous units—6 to 7 years instead of 4 to 5.

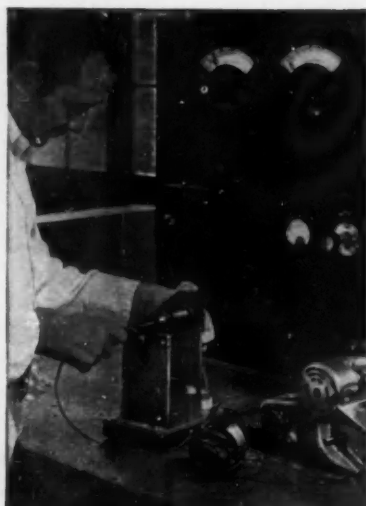
For more information on USS High Strength Steels, write United States Steel, 525 William Penn Place, Pittsburgh 30, Pa.

USS and COR-TEN are registered trademarks

United States Steel Corporation • American Steel & Wire Division • Columbia-Geneva Steel Division • National Tube Division • Tennessee Coal & Iron Division • United States Steel Supply Division • United States Steel Export Company

*Address made by Mr. Austin J. Paddock, Administrative Vice President—Fabrication & Manufacture, United States Steel, before The Engineering Society of Detroit, May 1960.

 **United States Steel**



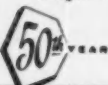
... and for **NEARBY SERVICE** on **Black & Decker**

tools. Black & Decker maintains 50 factory service branches plus authorized service stations to give your B&D tools the attention mechanical products need periodically. Keep your B&D tools in top condition, on the job all the time.

Only factory parts and factory-approved methods are used. Fast service and reasonable cost, always.



You'll find the location of the nearest B&D repair facility in the Yellow Pages under "Tools-Electric," or write for address to: THE BLACK & DECKER MFG. CO., Dept. 5405-S, Towson 4, Md.



Black & Decker

Quality Tool Service
More details? Circle 260 on reply card

168

MAINTENANCE

Continued from Page 81

Wire cord tires in use

Ryder System has gathered its data on one-ply wire cord tires and has come to three conclusions:

They get "improved tread wear over 100 and 112½-level truck tires and mileage equal to 115½ level truck tires. Also, Ryder got fuel savings amounting to two per cent, a much softer riding on drive wheel positions, fewer puncture flats, better traction and cooler running.

Ryder also pointed out these "liabilities": Inability to obtain a satisfactory recap or repair in local markets, inability to regroove satisfactorily, difficulty in integrating the tires within its fleets and driver resistance to using them on front wheel positions.

Watch caustic cleaners

International Harvester echoes a warning voiced in recent years by manufacturers:

Caustic cleaning compounds can cause considerable damage to certain materials.

When properly used, they "effectively remove grease, dirt, paint and gasket remnants from many parts," IHC says.

Try to avoid using caustic on aluminum, rubber, fiber, sintered bronze and bonding agents. In place of caustics, IHC suggests, use kerosene, mineral spirits or fuel oil.

These are the engine parts most vulnerable to caustics: Pistons and roller bushings, converter elements, brake rotors, valve bodies, oil transfer plates (all aluminum), clutch plates (bronze or composition-faced), rubber seals, gaskets, and brake rotors.

Lifting IHC C-100's

You can prevent damage to your International C-100 vehicles equipped with torsion bar suspensions, says IHC, by making sure front ends are lifted this way:

A lifting sling or chain should be placed around ends of the frame rails, using slings or chains with small enough hooks to pass through openings in the splash shields at ends of the rails.

Padding, fabric or rubber hose slipped over the sling will shield bumper and painted surfaces from scraping. The grille and sheet metal

also need padding where they might come in contact with the lifting sling.

Incidentally, International suggests slings or chains made in two sections joined with a ring or loop at the center. That combination will prevent slipping to one side while the vehicle is being lifted.

In-depth studies from SAE

SAE has recently published a number of papers which will interest truck, bus and passenger car fleet operators. Any of those listed here may be ordered from the Society of Automotive Engineers, 485 Lexington Ave., New York 17, N. Y. Specify paper number with order.

"Engine Wear Symposium" (SP-116) contains 20 meeting papers and one reprint from SAE Journal. Price: Members—\$5; non-members—\$10.

"Symposium on Cam and Tappet Wear Problems" (SP-127) contains three papers plus discussion. Price: Members—\$1.50; non-members—\$3.

"Engine Noise Symposium" (SP-157) contains 11 papers on combustion chamber noises occurring primarily in high compression ratio engines. Price: Members—\$4.50; non-members—\$7.

"Engine and Speed Governors" (SP-166) reviews designs and performance of governors compared with vehicle operator requirements. Seven papers. Price: Members—\$3; non-members—\$4.50.

"Engine Deposits Symposium" (SP-113) includes 18 papers and one SAE Journal reprint. Price: Members—\$5; non-members—\$10.

"Symposium on Fuels and Lubricants" (SP-139) includes six papers on detergency activity tests, lubrication of hydraulic valve lifters and air pollution. Price: Members—\$2; non-members—\$4.

"Maintenance of Automotive Engine Cooling Systems" (TR-40) is a textbook on construction, function and operation of vehicle cooling systems... a complete instruction and troubleshooting manual for mechanics. Price: Members—\$2; non-members—\$4.

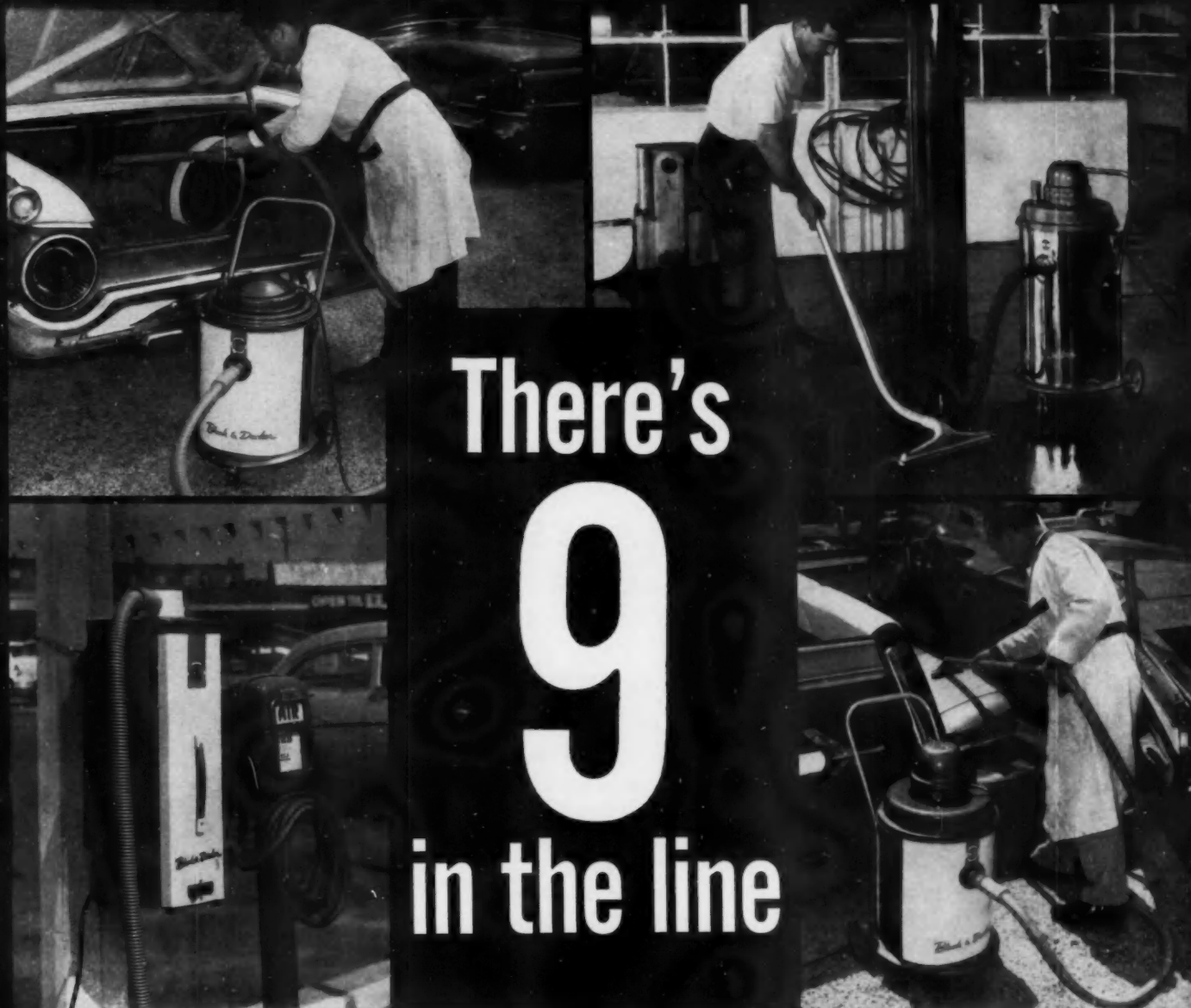
"Better Braking—How?" (SP-155) is a panel discussion on braking problems and their solutions. Price: Members—\$1; non-members—\$2.

"Tire and Wheel Runout and Balance Problems" (SP-171) contains eight papers on problem discussions. Price: Members—\$3; non-members—\$6.

END

Please Resume Reading Page 83

COMMERCIAL CAR JOURNAL, May, 1961



There's 9 in the line

And what pick-up! B&D's new, longer line of heavy-duty vacuums cleans up all dirt and grit, even wet sludge in the grease pit!

"Sweep" out a car, "mop" up a wet floor . . . Black & Decker's new line of nine heavy-duty vacuum cleaners helps any garage keep its face clean. You can clean up anywhere, have power to spare. Mobility is no problem. And if you choose the versatile, whisper-quiet No. 25, you can carry it wherever you go . . . strap it on your back to clean off the top of the stock rack.

Redesigned tank inlets make for extra capacities (the entire line ranges from ¼ bushel to 40 gallons). New drain-off outlets are standard on stainless

models for quick and easy wet-disposal. All attachments are as streamlined as next year's car. And, don't forget famous B&D Service. Check into the new line of nine NOW at most B&D Jobbers . . . for low monthly payments. *For sales or service, look in the Yellow Pages under . . .*



Black & Decker®

WORLD'S LARGEST MAKER OF POWER TOOLS

More details? Circle 187 on reply card inside back cover

THE BLACK & DECKER MFG. CO., Dept. 5405
Towson 4, Md. (In Canada, Brockville, Ont.)

- ☐ Please arrange a demonstration of B&D Vacuum Cleaner line
☐ Please send additional information on . . .

Name Title

Company

Address

City Zone State



☐ Impact Wrenches



☐ Polishers



☐ Valve Refacers



☐ Drills



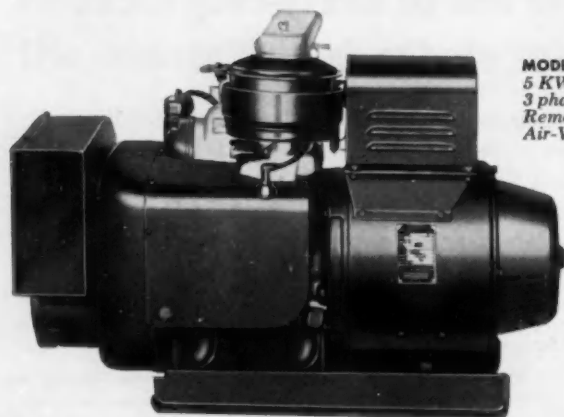
KOHLER ELECTRIC PLANTS

Efficient, cost-saving power for Super Trailmaster refrigeration units

The Kohler electric plant housed and mounted beneath this Watkins truck is easy to service. It slides out for quick access to all assembly parts at ground level. "Air-Vac" cooling exhausts heat beneath the trailer. Engineered for economy, the Kohler plant assures low-cost operation of the Super Trailmaster refrigeration unit made by American Manufacturing Company, Inc., Montgomery, Alabama.

Kohler electric plants provide uninterrupted power for truck refrigeration in transit or at the dock . . . Known everywhere for reliability . . . Manufactured in sizes to 115 KW, gasoline and Diesel. Write for folder K-18.

KOHLER Co. Established 1873 KOHLER, WIS.



MODEL SRM51,
5 KW, 230 volt,
3 phase, AC.
Remote start with
Air-Vac cooling.

KOHLER OF KOHLER

ENAMELED IRON AND VITREOUS CHINA PLUMBING FIXTURES • ALL-BRASS FITTINGS
ELECTRIC PLANTS • AIR-COOLED ENGINES • PRECISION CONTROLS

VEHICLES & EQUIPMENT

Continued from Page 25

for a system, developed by American Electric Power System, which was inspired by the birds—the ones that sit on power lines but receive no shock. Holan's aerial lift uses the same principal of insulation from the ground. The lineman works from a fiber glass bucket, lined with metal mesh, that is connected by metal clamps to the power line. No current flows through him.

The system is said to permit line repairs without interruption of service while speeding work.

Holan says utility executives who would like to see the method demonstrated should contact the company at 4100 W. 150th St., Cleveland 35, Ohio.

1961 Truck Trailer Shipments

Type of Trailer	Jan.	Feb.
Vans		
Insulated and refrigerated.....	372	415
Steel.....	45	32
Aluminum.....	327	383
Furniture.....	64	70
Steel.....	61	60
Aluminum.....	3	10
All other closed-top.....	1,148	1,199
Steel.....	223	259
Aluminum.....	925	940
Open-top.....	176	159
Steel.....	43	41
Aluminum.....	133	117
Total—Vans.....	1,760	1,842
Tanks		
Non- and low-pressure		
Petroleum		
Carbon and alloy steel.....	79	45
Stainless steel.....	17	15
Aluminum.....	94	109
Total—Petroleum.....	190	169
Chemical, food, fluid solids		
All other, incl. aircraft	32	55
refuelers.....	23	49
High-Pressure (LPG),		
chemicals, etc.....	50	38
Total—Tanks.....	297	311
Pole, pipe and logging		
Single axle.....	9	51
Tandem axle.....	9	
Total.....	18	51
Platforms		
Racks, livestock and stake.....	32	26
Grain bodies, all types.....	60	54
Platforms (flats), all types.....	399	303
Total—Platform.....	491	383
Low-bed heavy haulers.....	203	188
Dump trailers.....	76	156
All other trailers.....	222	216
Total—Complete Trailers.....	3,067	3,147
Dump trailer chassis.....	17	23
Trailer chassis only.....	172	251
Total—Trailers and Chassis.....	3,256	3,421
Detachable Van Bodies.....	240	273

Source: Industry Division, Bureau of the Census.

END

Please Resume Reading Page 29

Cotton Duck or Nylon EITHER WAY- YOU'RE COVERED

Name your truck tarp requirements . . . there's a Wellington Sears fabric that fits them perfectly! The many types and weights of cotton ducks supplied by Wellington Sears are built for long, hard service. For truck tarps made of coated materials, there's Wellington Sears Welkote nylon—a strong, light base fabric specifically engineered for vinyl or neoprene coating and the choice of quality coaters.

You'll find Wellington Sears fabrics in the lines of leading distributors. And you can choose them with complete confidence. They're backed by a century of experience in supplying fabrics to industry. And they've been proved in use to deliver the protection and durability you want. Write us for the names of suppliers . . . and for our free illustrated booklet "Protective Cover Fabrics," Dept. Y-5.

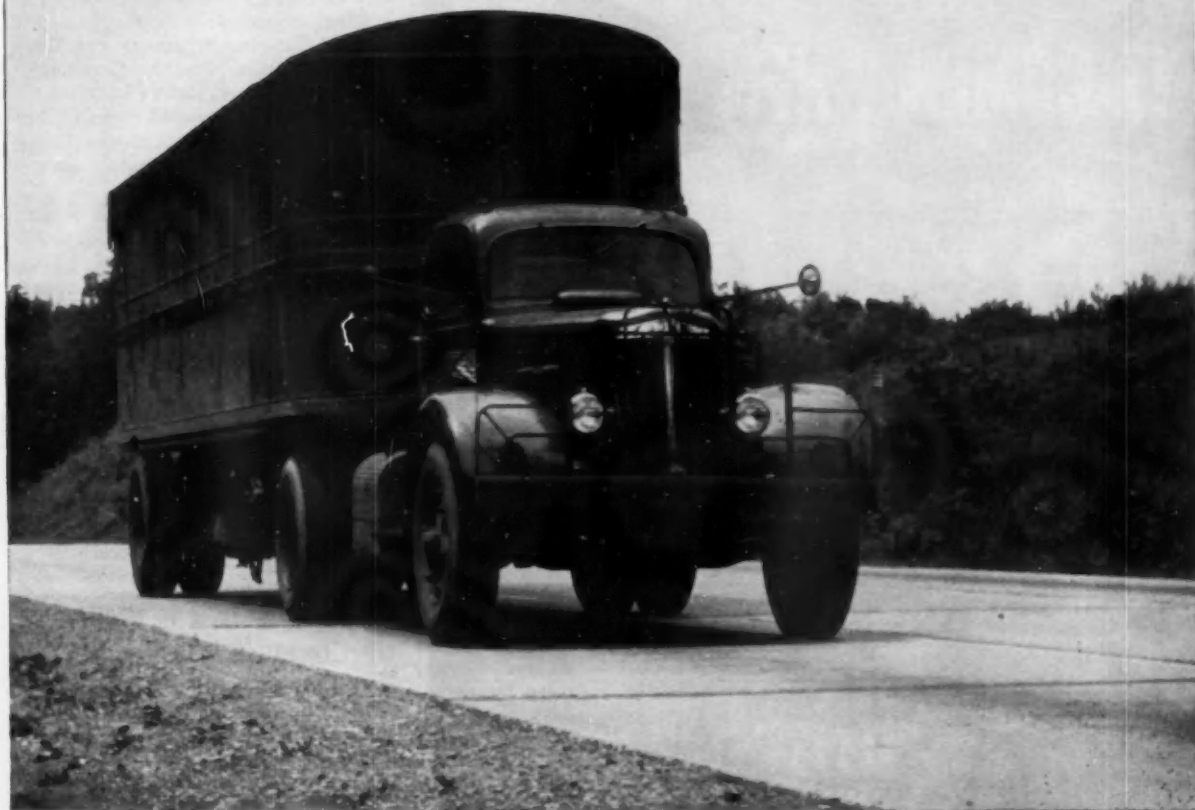
WELLINGTON SEARS

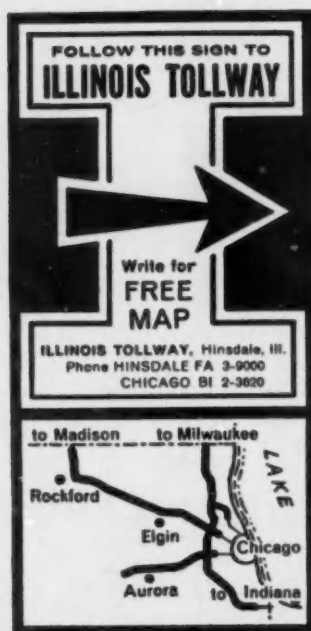
FIRST in Fabrics for Industry



WELLINGTON SEARS COMPANY, 111 W. 40TH ST., N.Y. 18, N.Y.

Akron • Atlanta • Boston • Chicago • Dallas • Detroit
Los Angeles • Philadelphia • San Francisco





More details? Circle 261 on reply card

TRUCK FLEETS

Continued from Page 13

adequate screening and proper training of new employees and improved techniques of on-the-job training.

"... Over 50 universities are now working with the trucking industry in providing such courses as motor fleet supervisor training, maintenance for safe and efficient operations, motor freight management, top management, efficient terminal management.

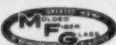
Communications — The industry is

For any automotive use of **MOLDED FIBER GLASS**

call the pioneers and experts.
Free literature, counsel and
quotations. No obligation. Write:

MOLDED FIBER GLASS BODY CO.

4637 Benefit Avenue
Ashtabula, Ohio



hoping for savings up to 50 per cent through Bell System's new Telpak plan. It permits common carriers to pool their long-distance calls and buy them in bulk. The system can be used for telephone, teletypewriter, telephotograph, facsimile, data transmission, or remote metering.

A telephone answering and message recording device can be used in unmanned or under-manned call stations or freight depots. And the Conference is working with General Dynamics to develop a facsimile system for transmission of mail.

Cargo cages for small shipments—The industry is looking for a cargo cage with small loss of cube. It must be mobile, strong, long lasting, flexible and inexpensive. Carriers want cargo cages that will permit them to haul LTL shipments directly from shipper to destination without repetitive handling in between.

Mechanics and drivers—Mr. Herriott said: "Equipment, regularly maintained by skilled mechanics and driven on the highways by better trained drivers, will last longer and cost less to operate."

Trucking-rail company formed

Six large motor carriers and a railroad trailer company have formed a new firm to finance, construct and operate piggyback loading and unloading terminals.

T.O.F.C., Inc. (it stands for Terminal Operating Facility Company), will have its headquarters in Chicago.

Half of it is owned equally by Cooper-Jarrett, Denver-Chicago, Eastern Express, Midwest Emery, Interstate System and Spector.

The other fifty per cent is owned by The Rail-Trailer Co. of Chicago.

Erie - Lackawanna Railroad (New York to Chicago) has signed a long-term agreement to provide rail services for the motor carriers. The railroad and T.O.F.C. will jointly finance construction of piggyback terminals.

Spector also announced in its annual report this year that it holds 105,603 shares of Erie-Lackawanna common stock. Spector said it bought the stock in 1959 as part of a plan to increase piggyback service.

Truck fleets hope to qualify eight racers in Indianapolis 500

Five truck fleets this year go to the Indianapolis 500 track with hopes of qualifying eight racing vehicles for the May 30 races.

Dean Van Lines leads the list with
(TURN TO PAGE 174, PLEASE)

IT COMES WHEN YOU GO!

It's the Truck on the GO that gathers the Dough. A RIKER Muffler or complete exhaust system keeps Trucks and Buses on the GO longer, more economically and with higher operating efficiency. Engineer-conducted over-the-highway tests plus the experience of thousands of Operators who demand RIKER on their new equipment purchases, as well as for replacement, provide positive proof of RIKER superior performance in Arctic, Temperate and Torrid Zones around the globe

RIKER

ALWAYS CHECK
THE EXHAUST SYSTEM
FIRST

MANUFACTURING, INC. 4901 Stickney Ave., Toledo 12, Ohio

you'll get bigger fleet savings with the biggest fleet seller!

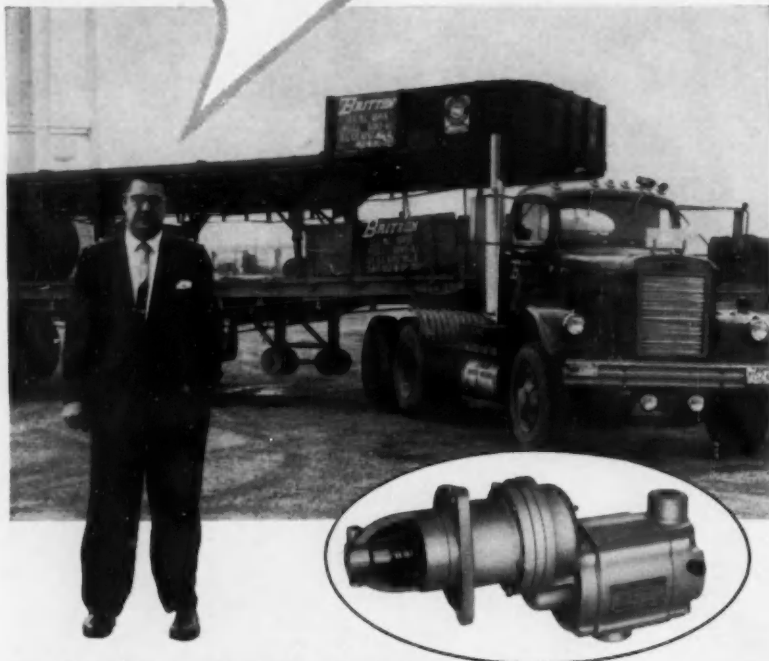
There are lots of reasons why Chevrolet is the biggest fleet seller, and one of the biggest is the way they save money. Take the way Chevies cut maintenance cost for example—perhaps the next most important economy after their low initial price. Thanks to their solid-built dependability, Chevrolets are past masters at keeping fleet upkeep *down* to a minimum, even in the most strenuous metropolitan service. The way they coax the most out of a gallon is another economy *plus* that will look good on your books. And we haven't yet mentioned the substantially higher trade-in Chevrolets traditionally bring over every other full-sized car. (The actual figures often come as a happy surprise even to old pros in the business.) Why not let your dealer fill you in on these and all the other ways you can save really big money for your company by investing in America's biggest fleet seller! . . . See your local Chevrolet dealer or write to Fleet Department, Chevrolet Division of General Motors, Detroit 2, Michigan.



The fleet car America likes to do business with



**"AIR STARTER requires
no repairs in 5 years
and over 700,000 miles!"**



Roger Nelson, Terminal Manager for Britton Motor Service at their Chicago base has this to say about Ingersoll-Rand Air Starters...

"Your Size 9BM Air Starter was applied to one of our Cummins diesel powered White trucks. This truck was in operation for five years and accumulated in excess of 700,000 miles. We are very satisfied with the service life and operation of your Air Starters. The newer Size 10BM we now have in service has even more power."

You can cut fleet maintenance costs with modern Ingersoll-Rand Air Starters by eliminating the costly replacement of batteries. These units produce surer, faster starts and are unaffected by extreme weather conditions.

Ingersoll-Rand Air Starters are made in 4 sizes for starting diesel or carbureted engines from 300 cu. in. to 20,000 cu. in. displacement. For complete information on these efficient starters... write for your copy of "Go Modern—Start with Air", Form 5094E.

Ingersoll-Rand

210A-18

11 Broadway, New York 4, N. Y.

174

More details? Circle 192 on reply card inside back cover

TRUCK FLEETS

Continued from Page 172

three entries—all named "Dean Van Lines Special." Eddie Sachs and Bud Tingelstad have been signed to drive two of the cars.

Hoover Motor Express has shown up with two cars, but has named only Don Branson as a possible driver.

Coming in as single entries are the "Bell Lines Trucking Special" driven by Gene Force, "Stearly Motor Freight Special" driven by Paul Russo; and "Denver-Chicago Trucking Co. Special" driven by Chuck Arnold.

The original list of 55 entrants—possibly more—will be whittled to the 33 cars which run the fastest qualifying heats. Trials begin May 15.

Hertz Vice President



O. K. LeBron has been elected vice president and general manager of the Truck Leasing Division of the Hertz Corp., New

York City. He formerly held the same office for Hertz Central Truck Leasing Division, which became part of the Corporation's consolidated truck leasing and rental operations last November.

Truck Roadeo, safety meeting are combined

The first combined National Truck Roadeo and annual meeting of the ATA Council of Safety Supervisors has been scheduled for Detroit, Aug. 13-17.

They are being held together to cut travel time by safety men and to provide a single big safety meeting to serve them better.

The Roadeo begins on Aug. 13, with finals scheduled for the 16th. The council's sessions begin Aug. 15, to end on the 17th.

Two changes in Roadeo rules: Drivers will compete in four classes—straight or delivery truck, four- and five-axle tractor trailers, and tank trucks. National champions will also have to defend their titles on the state Roadeo level before going to the Detroit finals.

END

Please Resume Reading Page 17

COMMERCIAL CAR JOURNAL, May, 1961



LUBE LOGIC

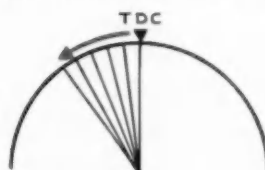
MONEY-SAVING IDEAS FOR AMERICA'S FLEETS

Make these four checks on your engine before you switch to high-test gasoline

One old saw that keeps popping up is the one that says "The only way to solve engine knock is to switch to high-test fuel." It's not necessarily so, and before you switch to premium fuel to quiet those rattling engines, check out these four items first.

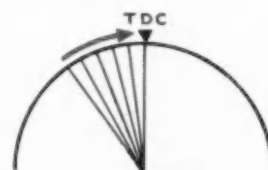
1. Improper ignition timing

The spark setting that's right for your area is the one that's consistent with the quality of the fuel that's locally available. Check the service bulletin issued by the engine manufacturer to see what spark setting is recommended for your area. The basic setting is intended to work right with regular grade fuel.



CRANKSHAFT

SLIGHTLY RETARDED SETTING is recommended if the fuel in your part of the country has below-average octane rating.

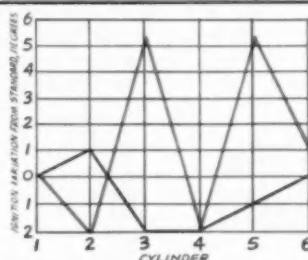


CRANKSHAFT

SLIGHTLY ADVANCED SETTING is recommended if the fuel in your area is above-average octane rating.

2. Worn distributor drive train

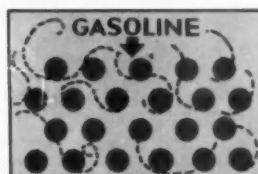
If you set the ignition at the correct timing and still get knocking, check the gears, couplings and bushings of the distributor drive train for wear or looseness. Extreme spark-scatter (wide difference in the timing of individual cylinders) can eventually show up in repeated cases of piston burning.



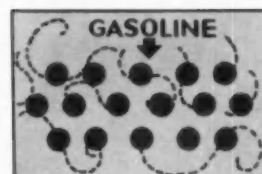
WORN DISTRIBUTOR DRIVE TRAIN can cause extremely wide variation in timing of individual cylinders. This graph shows timing on a truck engine when it was new (black line) and after 10,000 miles. Worn distributor parts make some cylinders (#3 and #5) more than seven degrees in advance of others.

3. Non-standard carburetion

(replacing original-equipment carburetor jets with leaner ones to increase fuel economy). This can be a real problem on trucks, because truck engines are often fitted with comparatively lean carb jets as original equipment, to decrease fuel consumption. If you substitute even leaner jets, the engine may become more prone to knocking, especially at high speeds, where it's most damaging, and particularly if fuel distribution among the cylinders is uneven.



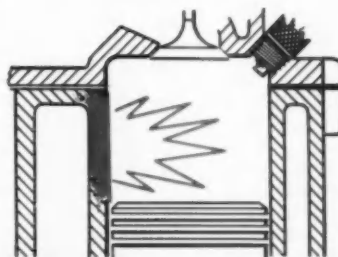
A STANDARD CARBURETOR provides a carefully calculated mixture of air and gasoline designed to give good performance without excessive fuel consumption.



BY ALTERING STANDARD JETS you may increase the air/fuel ratio too much and produce a too-lean mixture, which in turn may lead to high-speed knocking.

4. Inadequate cooling

Anything that impairs cooling (rust or mineral deposits, for example) will tend to make the engine prone to knock through local overheating and pre-ignition. This type of knocking is likely to be worse in winter, when the radiator contains anti-freeze, because anti-freeze is a less efficient coolant than plain water.



RUSTED COOLING SYSTEM can create hot-spots which may ignite a compressed fuel charge too early in the cycle, and produce knocking.

THERE'S MORE
INSIDE:

Trailin' the Mail
with Al

New tips for trimming
maintenance costs

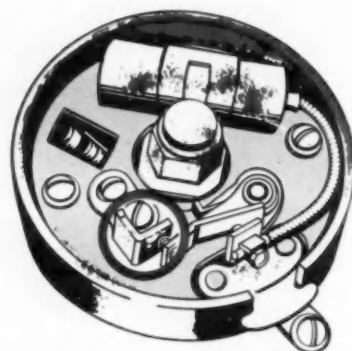
Valve-breakage:
causes and cures

LUBE LOGIC

New tips for

Oil on distributor points may mean loose shaft seals

Next time you're checking your distributor points for wear or pitting, look for signs of oil blackening on the points and on the inside of the distributor housing. Excessive oil, or oil deposits, at any of these spots, is either a symptom of over-lubrication or of leakage up past the distributor shaft. Examine the shaft bushings and seals for looseness, wear or deterioration. The distributor is so important to overall engine functioning that any worn parts should be replaced right away.



Dear Al,

Can you explain why the radiator hoses on some of our cars have collapsed, even though the radiator is full of water?

M.B., Anderson, Ind.

The large-diameter hose used on older cars may collapse of its own weight if the lining has begun to separate. When a new hose tends to collapse, it's probably on a car with a pressurized cooling system. The cap on this type of cooling system should have a vacuum release valve. If the valve doesn't work, or if a cap with no valve has accidentally been put on the radiator, the vacuum that's formed when the engine cools off will suck in the radiator hose. The hose may stay collapsed until the next time the

Trailin' the Mail with AL

car is used. Then water pump pressure or buildup of steam pressure will push the hose back to its original shape.

If the lower hose collapses, it may be due to water pump suction as well as to the vacuum formation I just described. If the lower hose collapses, there's no water circulating through the engine, which is, of course, very dangerous. In any case, whether it's the top or bottom hose that collapses, immediate replacement is in order.

Dear Al,

What do you do with a car that misses at idle speed and at about half throttle, but doesn't have any problems at road speed? I checked for a spark at all the plugs, and although they were all getting a hot spark at all speeds, one plug made no difference at all when it was shorted out. I replaced this plug but it made no difference. A short while ago this car had new plugs, points and carburetor installed, but the miss still occurs. Intake manifold and carburetor seem to be tight and don't appear to suck air. I suspect a stuck valve or lifter. What do you say?

P.T.J., Spring Valley, Ill.

Essentially what's needed to make a cylinder fire is 1. compression, 2. ignition at the right time, and 3. a burnable mixture.

Compression is perhaps the least important of these, but a routine compression check will show up such possibilities as a cracked piston, broken rings, burned or sticking valves and lifters, or a blown cylinder head gasket. If the gauge needle moves upward evenly on successive compression strokes, you're assured that the valves are not sticking.

You've pretty well eliminated the ignition as a source of this problem, and, besides, if the spark plugs are in good shape it's unlikely that ignition faults would show up in one cylinder only.

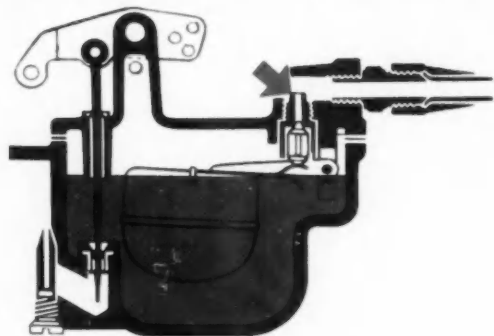
So, in spite of the evidence that the intake manifold is OK, we're left with Item Three as the probable trouble: evidently you're not getting the right mixture into the cylinders. Usually a mixture problem that's confined to one cylinder is due to excessive leanness. At idle, the mixture must be at least twice as rich as the mixture you need for best economy at road speed, so even the tiniest air leak will make the mixture too lean and raise hob with idle.

With a special precaution about the fire hazard, I'd recommend the old reliable gasoline test to find out if the gasket on the intake manifold is the culprit. With an oil can, put a few drops of gasoline around the intake manifold nearest the bad cylinder. If the engine idling picks up noticeably, you've got a gasket leak. You can verify this with an exhaust gas analyzer, if you have one. The analyzer will show a richer mixture a few seconds after the gasoline gets into the leak.

Other air-leak possibilities: a crack or hole in the intake manifold casting leading to the intake on the faulty cylinder; excessively worn valve stem; crack in intake manifold between carburetor riser and exhaust crossover; loose carburetor or leaking gaskets; loose automatic choke tube; ruptured vacuum diaphragm in combination fuel/vacuum pump; leaking windshield wiper or hose; leaking distributor vacuum advance diaphragm or tube.

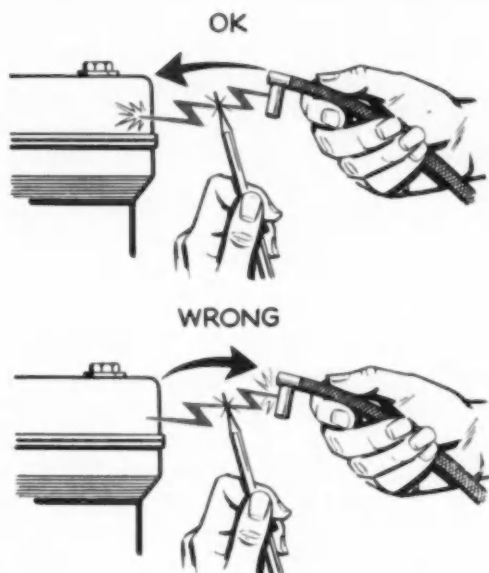
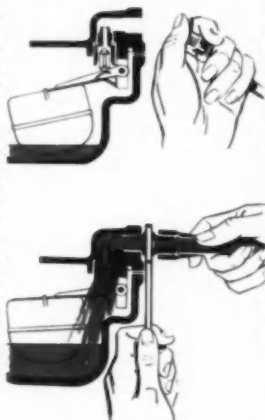
Shoot in your puzzlers to "Trailin' the Mail with AL," at Texaco's National Sales Division, 135 East 42nd Street, New York 17, N. Y. There's a real fine group at the Division—ready to serve every "on-wheels" fleet from coast to coast.

trimming maintenance costs



Quick cure for carburetor flooding

Repeated stalling and hard restarting is often caused by a tiny particle of grit, which lodges under the carburetor float needle valve, lets too much gasoline into the carburetor and causes flooding. You can often solve the problem with this little routine: disconnect the fuel line at the carburetor, and plug it with a cork, a pencil, or anything else that will fit. Then run the engine until you've used up all the fuel in the carburetor. Reconnect the fuel line, crank the engine, and the rush of gasoline into the empty carburetor will often flush the foreign matter out of the needle valve seat. If you've got a friend but no cork, have the friend start the car while you plug the disconnected line with your thumb. Same difference.



Lead pencil tests for reverse polarity in ignition system

Reverse polarity in the ignition can turn a smooth-running engine into a rough and lazy loafer, simply because it's not getting a hot enough spark in the plug terminals. There are two causes for reverse polarity: improperly connected battery, or improperly connected ignition coil. In either case, the terminals are reversed.

To find out if reverse polarity is your problem, first make a visual check of the battery and coil connections. If these seem to be OK, check further with an oscilloscope, coil tester, ignition analyzer, or, in a pinch, an ordinary wooden pencil.

First sharpen the pencil so at least 1/4" of lead shows. Remove one of the spark plug cables, and run the engine at a fast idle. Hold the cable terminal near the engine block, and insert the pencil point between them. Move the cable terminal close enough to the block to make the spark jump from the terminal to the block through the pencil point. If the spark jumps toward the engine block, polarity is correct. If the spark jumps from the block toward the cable terminal, polarity is reversed.

Sticky business: 2 solutions



1. Mix-in-transit concrete trucks will avoid that rockpile look if you spray the outside with Texaco Rustproof Compound L. Spilled concrete won't stick to parts covered by the compound. The truck will look better and the paint will last longer.



2. Dump trucks that haul asphalt mixtures dump better if you spray the inside of the dump body with a mixture of Texaco Soluble Oil C and water before each loading. Use four parts water to one part oil. You get

best results if you add the oil to the water, instead of pouring the water onto the oil. A coating of this mixture keeps the asphalt from sticking to the truck.

Pardon us

One of our readers has called our attention to a bloop in our "Short Course on Checking Compression Pressure," which appeared in a recent Lube Logic.

Item #2 in the list says it's important to lock the choke in the wide-open position. We somehow neglected to add that it's also important to lock the throttle plate in the wide-open position. Leaving the throttle closed might give you low compression pressure readings.

Item #3 reads, "ground the primary wires of the coil." Specifically we meant to say, "disconnect the wire going from the coil to the distributor."

LUBE LOGIC

Valve breakage: seven reasons why it happens, and a solution for each cause

Valve failures are ordinarily caused by a number of inter-related factors, rather than by one single maladjustment. When you're faced with a valve-breakage problem you aren't out of the woods until you've examined all the



possibilities carefully. However, there's a "most likely" cause for most things, and that's what we've listed below: The most common causes for valve breakage, and a possible remedy for each one.

Probable cause	Possible remedy	Probable cause	Possible remedy
1. Unsuitable valve type.	Replace present valves with one of these types: two-piece, sodium cooled stellite faced, copper-cooled stems, oversize stems.	3. Excessive tappet clearance that permits heavy impact seating.	Reduce clearance to manufacturer's specifications.
2. Excessive valve temperature from:		4. Floating valve, due to:	
A. Lean mixture ratio.	Service carburetor and fuel system to correct ratio.	A. Weak springs.	Replace springs.
B. Poor valve seating.	Reface valves, seats; replace as needed.	B. Operating engine in critical speed range.	Change springs or vary engine speed.
C. Poor stem or guide condition prevents normal heat transfer.	Clean; replace valve or guide as necessary.	C. Valve-spring surge.	Change springs.
D. Insufficient tappet clearance that prevents seating.	Readjust tappet clearance.	D. Excessive tappet clearance.	Readjust clearance.
E. Incorrect valve timing.	Retime; replace chain sprockets or gears as necessary.	5. Cocked valve springs or retainers.	Replace worn parts, use care on reassembly to align parts correctly.
F. Incorrect ignition timing.	Retime ignition.	6. Seat eccentric to stem.	Check seat, stem and guide for wear; replace worn parts; grind seat in alignment with guide.
G. Full-throttle operation predominating.	Use heavier-duty valves if operating conditions cannot be changed.	7. Scratches on stem from improper cleaning.	Do not scratch valve stems during cleaning; follow recommended cleaning methods.
H. Excessive detonation.	Retime ignition, use higher-octane fuel, service engine to remove carbon deposits from combustion chambers.		
I. Excessive exhaust back pressure.	Unkink or clear exhaust or tail pipe, check muffler and replace if clogged.		
J. Valve-seat distortion.	Replace seat, make sure it is installed and ground correctly to assure full seating and heat travel.		

(Hold onto this list of valve-breakage causes. We'll follow it up in the next Lube Logic with the same kind of cause-and-cure outline on valve burning, and together they'll make a handy little reference list for times of stress.)

WHAT'S NEW FROM DETROIT

Save Valiant battery caps. The batteries on 1960 Valiants are fitted with special acid-spray-restricting vent caps to minimize underhood corrosion. If you have to replace the battery for any reason, make sure you save the original vent caps, and put them on the new battery. Otherwise the area above the battery will be subject to corrosion caused by normal road load charging.

TEXACO AUTOMOTIVE ENGINEERS



Every month we'll bring you the latest "doings" in servicing your fleet cars and trucks. We'll also bring you "sleepers," little angles, easy to overlook, where big savings in time and money can be made. But month in, month out, your local Texaco Automotive Engineer is your best source for money-saving lubrication ideas. Don't forget that "Lubrication is a major factor in cost control." Texaco Inc. National Sales Division, 135 E. 42nd St., N. Y. 17, N. Y., Dept. CCJ-120.

Tune In: Texaco Huntley-Brinkley Report, Mon. Through Fri.-NBC-TV

TEXACO 
 Throughout the United States
 Canada • Latin America • West Africa

Aluminum parts can be welded

BELL LINES, Inc., Charleston, W. Va., trucking firm, recently found its shop had accumulated about \$3000 worth of damaged aluminum truck parts. Before the lot was scrapped as a total loss, a welding expert was called in. Bell officials were told the parts could be repaired with "Heliarc" welding, a process developed by Linde Co. Division, Union Carbide Corp., New York City.

A "Heliarc" torch was installed in the shop and, two days later, every discarded part had been reclaimed. The trucking outfit reports that savings from this one salvage operation paid the entire cost of the torch and power unit plus the overhead for labor and welding materials.

Time savings

Prior to installation of the new process, Bell Lines contracted local welding shops for repairs on damaged aluminum parts. Dollar savings were offset by loss of time. Now the company handles 75 per cent of its aluminum repairs in its own shop. Aluminum trailers are often repaired while still hooked-up to the tractor. Minor repairs are usually completed in the first step. When large breaks occur, parts are first tack-welded in place, then filler metal is added to finish the job.

Dollar savings

Bell Lines says a tremendous dollar savings has been realized since installation of the new equipment. For example:

- A \$450 aluminum transmission case can be welded in about three hours for less than \$40.
- It only takes ½ hr of labor to salvage a bell housing worth \$125.
- Just \$20 and two hours work repairs a \$130 aluminum trailer wheel. (Under outside contract this job would cost \$55 per wheel, with four days downtime.)

More details? Circle 446 on reply card

CCJ

Slim and Greasy says: "In these days of low-cut gowns and short skirts, it really takes will power for a man to look a woman in the eye!"

CUT FLEET TIRE COSTS

with

"Balanced Inflation"

...automatically



One Eco Tirelator® in your truck shop can equal in annual cost-savings one free new tire for every truck in your fleet! Automatic Eco "Balanced Inflation" increases tire mileage—up to 20% more than you get from improperly-inflated tires. Tirelator trims checking and tire inflation to a labor-saving one-step operation—no gauge-hunting, no trial-and-error.

Whether your fleet is large or small, Eco Tirelator's "Balanced Inflation" lowers losses from vehicle down-time, helps maintain tight schedules, and increases tire life and safety.

Wall, post, and remote-control models let you put Eco Tirelators wherever they serve you best.

JOHN WOOD COMPANY

BENNETT PUMP DIVISION
Muskegon, Michigan

**FOR:
HAULING
WINCHING
DELIVERING
PUSHING
PULLING
POWERING
ON ROAD
OFF ROAD
ALL WEATHER
SERVICE,**

GET A
Jeep® FLEET!



If there's a job to be done, there's a 'Jeep' vehicle to do it. A tremendous array of 'Jeep' approved special equipment handles thousands of specialized jobs. Traditional 'Jeep' ruggedness keeps 'Jeep' vehicles on the job years

longer in any kind of weather, in any kind of "going" ☐ A 'Jeep' fleet is a sound business investment. Initial cost is low. Maintenance costs are low. And resale value is amazingly high. In fact, a two year old 'Jeep' Universal sells

for up to 90% of original list price ☐ Find out about the 'Jeep' vehicles that are specifically designed to meet your needs. Write to R. J. Kreusser, Fleet Sales Manager, Willys Motors, Inc., Toledo 1, Ohio.



'JEEP' FLEETS—FROM THE WORLD'S LARGEST LINE OF 4-WHEEL DRIVE VEHICLES

Willys Motors, Inc., Toledo 1, Ohio. One of the growing Kaiser Industries.

NOW

NEW BUSES DEMAND IT...

COMFORT CONSCIOUS CUSTOMERS EXPECT IT...

THERMO KING PROVIDES IT...

NEW 1961 THERMO KING BUS AIR CONDITIONERS FOR NEW BUSES

IN CITY TRANSIT OR
OVER-THE-ROAD USE*



- **Self-Contained**—Gas, Propane or electric power . . . fully independent of the bus engine—no power drain on bus engine.
- **Low cost**—unit and installation cost less than present factory-installed units.
- **High capacity**—keeps bus comfortable even with full load and frequent stops.
- **Easily installed**—secured in place by just 6 bolts . . . provides economical installation . . . quick replacement.
- **Backed by the World Leader of Transport Refrigeration!**



Thermo King AM-2 and AM-5 . . . Proven transit line profit builders are available for buses currently in service.



Passenger surveys have proven that rider comfort increases transit line patronage, gross revenue and net gain. Thermo King bus air conditioners provide rider comfort with the air-conditioner designed to complement the modern lines of today's streamlined buses.

To learn how the all-new, compact, lightweight, quietly operating Thermo King Bus Air Conditioner can put more sell into new bus merchandising, more profit into transit line operation . . . write Thermo King, Bus Sales Division . . . TODAY!

THERMO KING CORPORATION

314 West 90th Street • Minneapolis 20, Minn.

LAWS & REGS

Continued from Page 29

of the agencies' direction to come from the White House—including the right of the President to hire and fire commission chairmen.

He demanded that the agencies set firm policies. (At present it is on a case-by-case basis.) His aim: to give hearing examiners more final authority and free commissioners for "issues of true moment."

1961 Domestic Truck Factory Sales by GVW

Month	6,000 lb. and less	6,001-10,000 lb.	10,001-14,000 lb.	14,001-16,000 lb.	16,001-19,500 lb.	19,501-26,000 lb.	26,001-33,000 lb.	Over 33,000 lb.	Total
January.....	38,400	11,824	635	1,397	7,336	4,139	1,720	1,956	67,407
February.....	39,039	11,815	584	1,447	7,567	3,791	1,582	1,858	67,703
Total—2 Mos. 1961..	77,439	23,639	1,219	2,844	14,903	7,930	3,302	3,814	135,110
Total—2 Mos. 1960..	109,486	29,704	2,097	5,064	28,958	11,069	6,233	5,875	196,453

The President is now calling an "administrative conference" in an attempt to simplify the legal procedures used by the agencies. The goal is to speed up the regulatory process and reduce case backlogs.

Kennedy already has the power to make some sweeping changes in the

agencies. His power could be used, except in those functions specifically spelled out by law. It is subject to Congressional veto, but when the Senate or House fails to veto within 60 days, the proposals become law.

The reorganization power is similar to that given the White House in 1949, but allowed to expire two years ago. Only stipulation: He must send the reorganization proposals to Congress.



REDUCE

Road Failures

STANDING HIGH ON THE A.T.A. LIST OF
"ROAD FAILURE CAUSES" * ARE:
TIRES/TUBES
ENGINE
BRAKES

These are also the very items on which maximum maintenance savings accrue when Excessive Engine Speed is prevented. SAVE much of the lost time occasioned by Road Failures and REDUCE GENERAL MAINTENANCE COSTS by equipping your vehicles with Handy Vari-Speed Governors.

* A.T.A. FOUNDATION VEHICLE MAINTENANCE STUDY, COMMERCIAL CAR JOURNAL DECEMBER 1960.



KING-SEELEY DIVISION

OF KING-SEELEY THERMOS CO.

ANN ARBOR • MICHIGAN

WORLD'S LARGEST MANUFACTURER OF AUTOMOTIVE GOVERNORS

Jail for 'gray area' truckers?

George A. Smathers, chairman of the Senate Surface Transportation Subcommittee, has suggested jail terms as punishment for "gray area" truck operators.

He advised the American Trucking Assns. to propose legislation for imprisonment of persons who violate the Interstate Commerce Act. Jail sentences, he said, would be more effective than more ICC enforcement personnel.

Sen. Smathers told an ATA spokesman that such proposals would get congressional approval if they were submitted by the ICC.

His suggestion was made during an ATA spokesman's presentation of five proposals to curb "gray area" trucking.

"Gray Area" truckers look on fines as "a business expense," Sen. Smathers said. "... It just becomes ... a game, because you have no real penalties," he added.

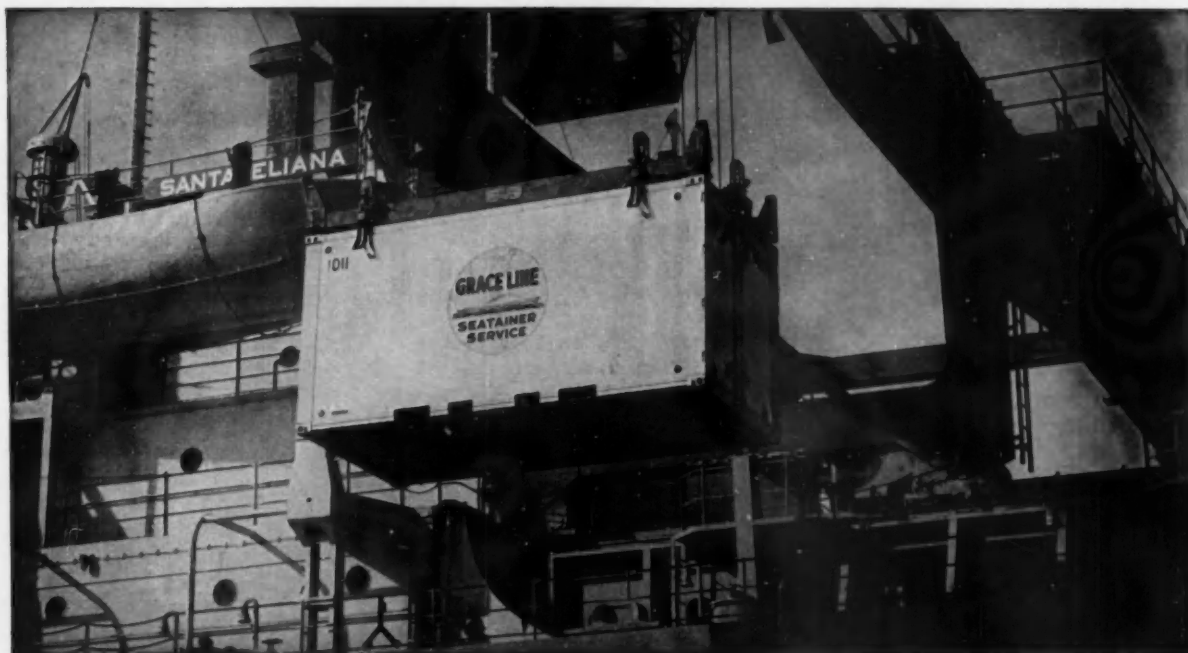
"If we catch one or two and put them in the brig and let them stay there, and lose their business—they'll stop," he said.

ICC simplifies reports forms

Interstate Commerce Commission has turned three time-consuming reports into a single report. It will mean a nationwide reduction of 24,500 separate reports.

Monthly Report Forms BMC 60, 61 and 62—"Hours of Service Report," "Carrier's Monthly Report of Excess On-Duty Time and of Excess Driving Time of Drivers," and "Carrier's Monthly Report of No Excess Driving Time and No Excess Driving Time on Duty by Drivers"—are the ones affected.

Motor Carrier Annual Report (TURN TO PAGE 186, PLEASE)



Your Cargo's Safer In Containers Built Of Parish Steel Components!

This cargo container featuring high-strength Parish steel components is one of 1,500 built by Highway Trailer Company for the Grace Line for interchangeable sea, rail, and over-the-road transportation.

Re-useable containers built of Parish steel components keep your cargo sealed and protected against weather and pilfering. They last indefinitely, require little maintenance, guard against corrosion and the possibility of fire.

Parish high-quality steel components are precision-produced in large volume, pre-punched to allow assembling by the new Universal Fastener System which speeds construction and reduces container cost to you.

Parish engineers will work directly with you or your container fabricator in the designing of containers to meet your specific requirements. The next time you're in the market for containers . . . call on them for assistance.



In grueling stacking tests, this container, fabricated of mighty Parish steel components, withstood loads in excess of 120 tons!

PARISH

PRESSED STEEL



DIVISION OF DANA CORPORATION • READING, PENNSYLVANIA

designed for economy

ACHIEVERFONE

Could you afford to be without a telephone? The time spent in your car or truck, completely out of touch with potential customers, can be your greatest hidden business expense.

Avoid this with the AChieverfone, the mobile radiotelephone that permits you to call or to receive calls from any telephone in the

world! Check into the advantages of AChieverfone. You will learn why it is today's most modern mobile phone. For example, AChieverfone has just two units—the receiver-transmitter and the control head. This means AChieverfone takes up less space in your cars, trucks, or vans. In addition, low power drain, rugged and reli-

able construction and fast installation make AChieverfone better, more economical than any other mobile phone system available.

With AChieverfone you can equip all your vehicles with an efficient mobile phone system. AChieverfones will open up entirely new areas of business potential for you and your company.



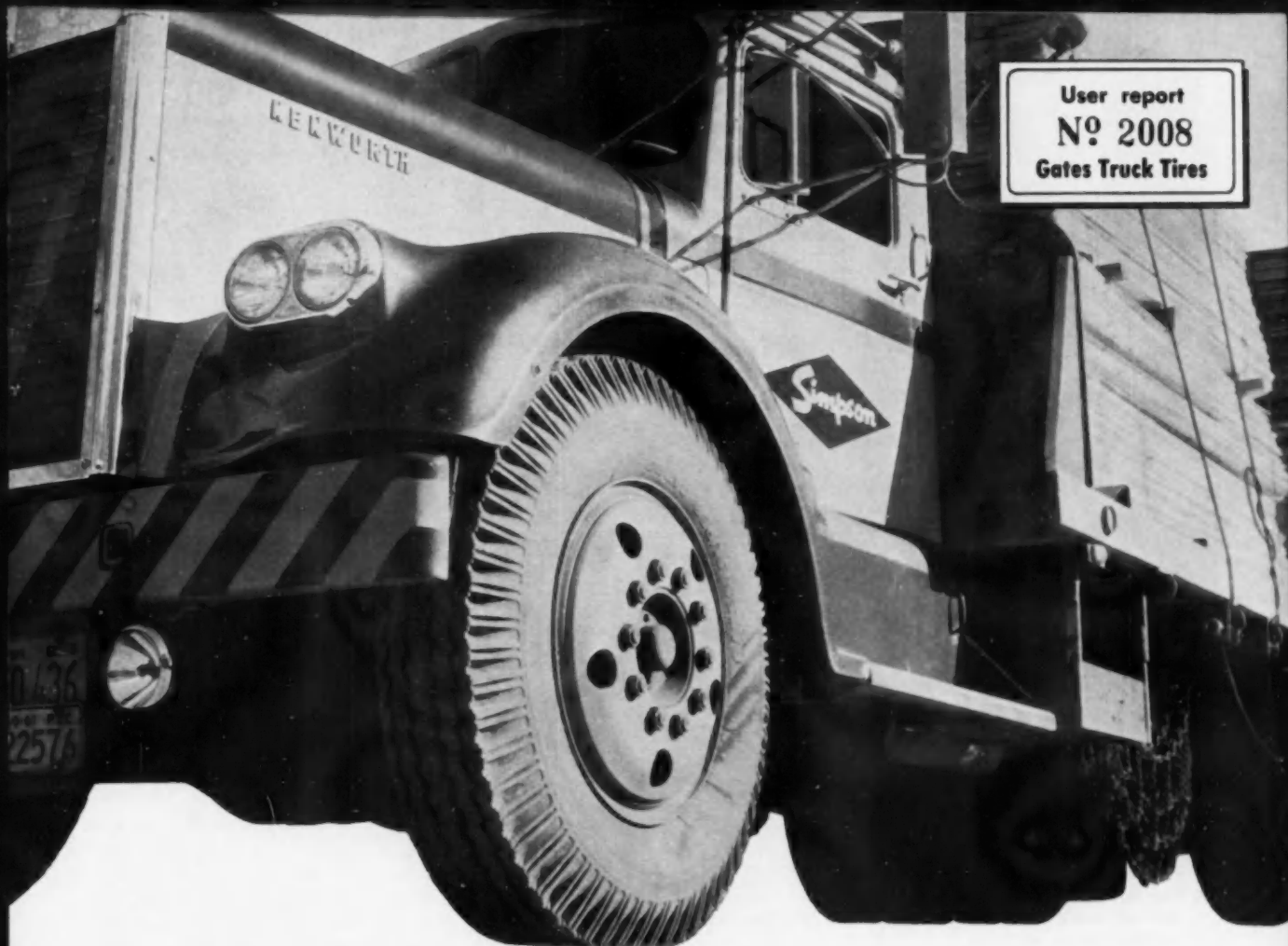
An Achievement in Mobile Communications

AC Spark Plug 

The Electronics Division of General Motors
Milwaukee 1, Wis. Telephone BRoadway 3-1120

Available only in the Continental U.S. at the present time.

User report
Nº 2008
 Gates Truck Tires



Simpson Timber Company gets 250,000 to 300,000 total miles from Gates High Capacity Tires



says Bill Bither, Shop Supervisor, Simpson Timber Company, Klamath, California

"We operate ten interstate truck-and-trailer rigs, eleven on-and-off highway log trucks and dollies, and forty-two other miscellaneous vehicles here at the Klamath site," says Bill Bither. "We're using Gates Cross-Bars on our interstate rigs and Gates C-T Rib Heavy-Dutys on our log trucks."

"On our Gates Super Cross-Bar Tires, we're getting 100,000 miles on original tread as drivers, then switching to trailers and getting an extra 25,000 to

35,000 miles before capping. With recaps, we're running a total mileage of between 250,000 and 300,000 miles on our Gates Tires!

**Gates Road-Hazard Guarantee
 is Real Money-Saver!**

"In logging operations especially, the Gates Road-Hazard Guarantee has saved us money, particularly when a nearly new tire is destroyed by some factor beyond our control. That doesn't happen too often, though, because Gates Tires have such sturdy carcasses they just don't break easily!"

The Gates Rubber Company, Denver, Colorado

Look for this emblem

Only Gates 'HC' High Capacity Truck Tires are backed by this



UNCONDITIONAL

Road Hazard Guarantee:

Covers ANY failure, including blow-outs, bruises, rim-cuts, etc., for full tread life. *No time or mileage limit.* Should tire fail, you get a NEW tire at once, with full credit for unused mileage, based on Gates Standard Adjustment Schedule.

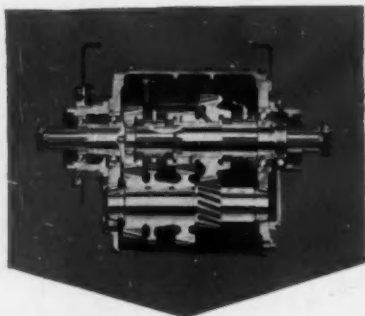
For your free copy of Gates Truck Tire Service and Engineering Data Book, see your Gates Distributor, or write . . .

Gates Truck Tires

More details? Circle 198 on reply card inside back cover



TPA 590



Specify
FULLER
Specify the

MODEL
For medium-heavy duty trucks and tractors specify the
FULLER '65 SERIES
3-SPEED AUXILIARY

- High capacity
- Widest range of ratios
- Top-mounted power take-off optional
- Low initial cost, reduced maintenance
- Available from all truck manufacturers on specification

65 SERIES
(Medium-heavy-duty)
RATIOS

MODEL	SPLITTER RATIOS		DEEP REDUCTION
	High	Inter-mediate	
3-A-65	.754	1.00	2.221
3-B-65	.804	1.00	1.239
3-C-65	.754	1.00	1.239
3-D-65	.804	1.00	2.221
3-E-65	.804	1.00	1.74
3-F-65	.754	1.00	1.74
3-G-65	1.00	1.32	2.221
3-H-65	1.00	1.32	1.74

Specify



Specify the MODEL
FULLER TRANSMISSION
DIVISION
EATON MANUFACTURING COMPANY
 KALAMAZOO, MICHIGAN

LAWS & REGS

Continued from Page 182

Forms C and E have been reduced by two pages of statistical details. Some 14,450 small motor carriers are affected by the change.

New York truck tax falls short

New York City's truck tax has reportedly fallen almost 30 per cent short of the revenue it was expected to produce.

A goal of \$5.5-million was set in levying the \$20 tax on trucks under five tons and \$30 on trucks over five tons.

Among the States . . .

Here are new laws, in brief, that may affect your fleet. For details, check with your state truck or bus association or motor vehicle department.

Alaska—increases driver's license fee to \$5 with 3-year validity period (H.49).

Arkansas—permits more contracts per contract carrier, limits total mileage (S.296); increases certificate of title fee to \$1 (H.523); refunds local bus fuel tax (S.182); requires liability insurance filing to license taxicab or similar for-hire vehicle (H.536); requires identification numbers on school buses (H.267).

California—extends registration fee refund period to 3 years (H.43).

Delaware—provides for out-of-state vehicle inspection (S.46).

Idaho—requires mileage reports on commercial vehicles over 16,000 lb (H.252); requires buyer of used school bus to paint it new color (S.130); increases weight limits on 39-51-ft axle spacings to 68,000-73-280 lb (H.250); sets rules for PUC to issue motor carrier permits (H.287); sets minimum bodily injury or death coverage at \$10/20,000 (H.119).

Indiana—increases overall-length limit to 60 ft for auto transporters (H.415); requires trucks hauling animals to be enclosed in winter (H.104).

Maine—regulates poultry transport (H.954); sets penalty for uninspected vehicles (S.451); repeals registration law on non-resident commercial vehicles doing business more than six months a year (H.440).

North Dakota—boosts registration fees (H.550); permits red or green light on front of school bus (H.843).

END

Please Resume Reading Page 81

Longer tire life . . .

Continued from Page 101

The destructive condition of the Nevada test showed in general the same cord life profile. Tires tested were 6.70 x 15 tubeless Tyrex and nylon cord tires. But note this abuse: Inflation—18 psi, wheel load per tire—1172 lb, average speed—70 mph (73 mph maximum), miles per day—1000. Tires were checked up to 15,000 miles (at which time they were bald).

Even strength life

Cord samples checked for strength at this 15,000-mile accelerated wear mark still showed 82 per cent or more of their original strength.

During the cab test, only four out of the 500 tires were considered as premature cord failures by FRL. These occurred between 48,000 and 60,000 miles. Although carefully studying the cords in the failure area, FRL draws no conclusions as to why. However, the Laboratories notes that visual inspection of the failure area indicates that the tires might have been run underinflated at some time previous to the failure.

In the Nevada test, even under the severe test conditions, FRL reports no tire failures due to cord failure! And only two tires were removed for reasons other than for cord testing. These dropped-out of the test at about 8000 miles because of tread separation.

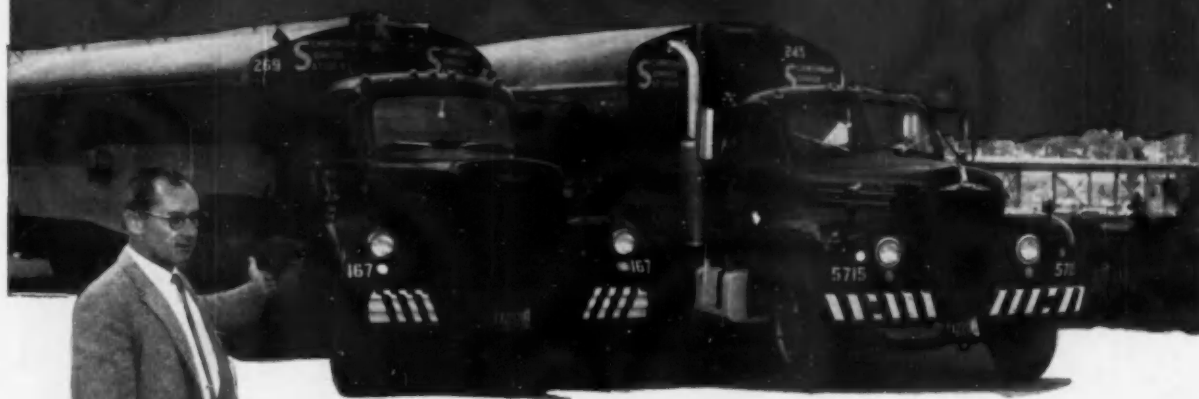
Sponsors of the tests are all Tyrex producers—American Viscose Corp., American Enka Corp., Buckeye Cellulose Corp., Courtaulds (Canada) Ltd., Industrial Cellulose Research Ltd., Industrial Rayon Corp., North American Rayon Corp., and Rayonier, Inc.

However, no nylon vs. Tyrex comparisons are made. Both cords show-up well. And you'll be the winner as FRL zeros-in on why tire cords fail.

END

Please Resume Reading Page 102

"We're sold on FULLER...100%"



Geared by Fuller... Schwerman Trucking Co. rigs get the "thumbs up" signal from Ted Freele, Vice President in Charge of Maintenance.

"We are standardizing on Fuller Transmissions in all of our vehicles . . . White, Diamond T and Macks," says Ted Freele, Vice President, Maintenance, of Milwaukee's Schwerman Trucking Company. Primarily carriers of bulk cement and petroleum products, Schwerman

operates approximately 770 tractors from its 19 terminals in 11 states.

"We want to make doubly sure that our service satisfies, and keeps on satisfying," Freele says. "With a fleet of our size, our equipment has to be first rate. That's why we have 475 R-96 10-speed ROADRANGERS and over 160 R-46 8-speed ROADRANGERS in our tractors. Schwerman also operates 38 Diamond T's with Fuller 5-C-72 Transmissions."

Ask your dealer about the Fuller Transmission designed to put more profit in your operation.

FULLER TRANSMISSION DIVISION
EATON MANUFACTURING COMPANY
 KALAMAZOO, MICHIGAN

Sales & Service: West. Dist. Branch, Oakland 6, Cal. • Southwest Dist. Office, Tulsa 3, Okla. • Automotive Products Co., Ltd., Brock House, Langham St., London W.1, England, European Rep.

COMMERCIAL CAR JOURNAL, May, 1961

More details? Circle 199 on reply card inside back cover

187



Our spark plugs are unplated, blue in color, and heat sealed. They are heat sealed because that seems to be the best way to prevent compression leakage. Proof? All modern aircraft spark plugs, all racing spark plugs, and all spark plugs made for severe military service are heat sealed. We heat seal every spark plug we make, including our Transport plugs for fleet use. That's



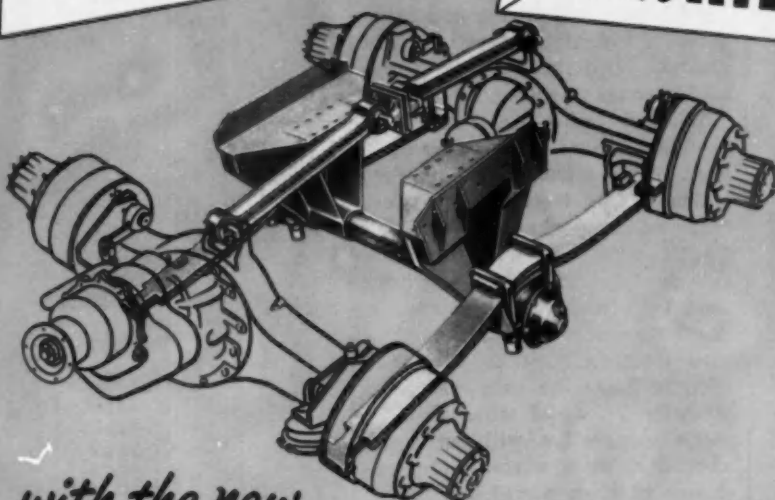
AUTOLITE

why we can guarantee every Autolite Spark Plug against leakage. Now take other spark plugs. The ones known for chrome. They look nice—they're plated—but most of them are sealed with powdered talc. Plugs sealed this way sometimes leak, lose compression, waste gas. Moral? If you want spark plugs guaranteed never to leak, remember: the color is blue...the name is Autolite.

COMBINE

PAYLOADABILITY

with **RIDEABILITY**



and get

- UP TO 434 LBS. MORE PAYLOAD
- A SMOOTHER RIDE LOADED OR EMPTY
- LESS WEAR AND TEAR ON TRUCK AND CARGO

with the new

ROCKWELL-STANDARD TANDEM SUSPENSION

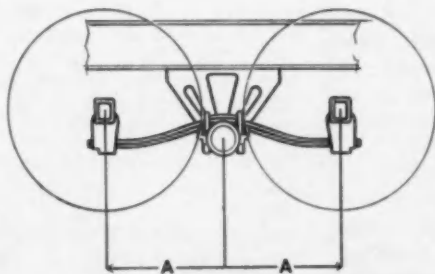
COMPLETELY NEW
IN DESIGN...

EXCLUSIVE "TAPER-LEAF" SPRINGS
MEAN LESS WEIGHT—
MORE PAYLOAD



It isn't the amount of spring steel but the way that it is used that gives strength to springs. With only *two* long tapered leaves in each spring Rockwell-Standard can achieve the same strength and load carrying capacity that standard suspensions can carry with multi-leaves...and at less than half the weight.

Optional aluminum frame support brackets and torque rods cut suspension weights by almost 25%.



Another Product of...

BALANCED "CRADLE-RIDE" FOR SMOOTHER GOING—LOADED OR EMPTY

Balanced design with long resilient springs assures an easy buoyant ride and reduces vehicle hopping, pitching and swaying. Because of greatly reduced inter-leaf friction even slight road imperfections are absorbed. This shock absorbing action keeps vehicles tight, minimizes maintenance, reduces cargo damage and makes handling easier on or off the road.

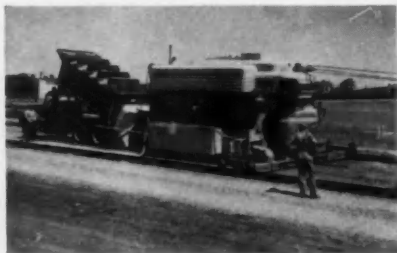
ROCKWELL-STANDARD
CORPORATION



Transmission and Axle Division, Detroit 32, Michigan

Another Example of Reduced Maintenance Costs (Performance Study #387)

Until three years ago, Barton Contracting Co., Osseo, Minn., contractor on the Minneapolis-St. Paul Freeway System, had used ordinary grease and oils in their fleet of 80 tandem trucks, asphalt plants, and heavy equipment such as the Rex paver, shown below.



Then, an International 180 Tandem lost its rear-axle plug. With a dry box, noise and overheating, a costly repair job seemed certain. ALMASOL 608 (SAE 140) GEAR LUBRICANT was installed, with no further work on the assembly, *and it has run without maintenance and practically no make-up oil for the three years since!*

Similarly, serious gear overheating was occurring on Barton's Bucyrus-Erie shovels and cranes, subjected to very heavy operating conditions. ALMASOL 607-608 GEAR LUBRICANTS reduced frictional heat and the need for make-up oil to an absolute minimum!

HERE'S HOW YOU CAN CUT YOUR EQUIPMENT MAINTENANCE COSTS: send today for complete information on ALMASOL 607-608 GEAR LUBRICANTS.

WRITE, WIRE OR PHONE DEPT. CCJ-4



**LUBRICATION
ENGINEERS
INC.**

Fort Worth 11, Texas

Custom Built Lubricants for Heavy Equipment

More details? Circle 264 on reply card



PM control

Continued from Page 96

their advantage. And show them it's an easy program to carry out.

If drivers work for you, the selling job plus your hiring and firing authority might be enough for PM control. Hire the right ones, unload the ones who are not receptive.

When drivers are also salesmen, you'll need help from the sales manager. You will have to sell him first—then the drivers—on the fact that you know what you're asking for.

Regardless of whether drivers work for you or the sales manager, you have one responsibility. You have to know your drivers. You have to know the ones who need attention . . . and why. Sympathetic cooperation will get a lot more done than a continuing exchange of "how come" and "why" memos. To a driver, these feel like a needle—no matter how reasonable your request for an explanation.

Have a PM program that puts drivers on your side, right from the start. Avoid the agony of repairing driver relationships after they are snarled.

Look at it another way. Get the driver to include car care as part of his planning—as part of his job—rather than something extra.

You'll probably have to give a little in some cases. There are always some drivers who earn more for the company than their vehicle abuse costs. There's no sense in getting rid of these. But you can try to educate them.

A hooker that helps keep the sales manager on your side: Fleet costs are part of the costs of selling. He wants to keep the lid on these just as much as you want to keep the lid on car costs.

And one last word. Don't tie up yourself, your cars, or your drivers in a red-tape strait-jacket. The fewer reports, memos, bulletins, letters, forms, etc., you use, the more likely you are to be successful in keeping the lid on maintenance costs.

END

Please Resume Reading Page 97



STATUS SYMBOL?

Yes, it's a status symbol! It speaks of smart practicality. It stands for good, sound judgment. It's seen in industry everywhere. And there's good reason for it!

Lee Industrial Workwear and Uniforms belong on the job. They bring a full measure of toughness, wearability, efficiency, economy. And they fit right into your industry's exact needs.

The Lee line is known as the largest, most complete in the industry. It includes Shirts, Jackets, Pants, Union-alls, Overalls, Service Coats and many others—and custom garments made to your specifications as well. And most important! Workingmen like to wear the Lee garment. It gives them a feeling of good-looking importance. Helps spark their morale—keeps it burning, too!

Call in an experienced Lee Consultant. Get the proven facts on the garments best suited to your needs. You'll find it's worth your while to let Lee work for you!

*(Lee comprehensive garment labels let you carry minimum inventory . . . yet fit employees easily, accurately, perfectly!)

WRITE TODAY TO
INDUSTRIAL DIVISION
H. D. LEE COMPANY
117 WEST 20th STREET
KANSAS CITY 41, MO.

Lee

More details? Circle 265 on reply card

how to **CUT** maintenance and operating **COSTS***

the answer is in this

FREE NEW GUIDE

***HERE'S HOW YOU SAVE with BEAR TRUCK SERVICES:**

- \$ A periodic program of front-end inspection and wheel balancing can save up to 50% on tire life.
- \$ Crankshaft-driveshaft balancing can increase operational life 25% and more.
- \$ Regular inspection and correction reduce breakdowns and costly down time.
- \$ Bear provides the technical training for YOUR operators that assures doing the job RIGHT.
- \$ Bear helps you select services especially suited to YOUR particular operation and equipment.
- \$ All Bear Truck Services are ruggedly engineered to insure long-life, trouble-free operation.



this **GUIDE** shows
you how to meet your
**SPACE and BUDGET
REQUIREMENTS!**

In the new Bear Truck Service Guide Book, you'll find equipment like the Truckster Service shown on the cover of this book. It fits in a space 13½' x 14½' and enables you to handle alignment, front axle and rear housing cor-

rections on all cars, trucks, buses and tractors. Along with this Bear Guide, we'll be glad to send you the complete Case History reports on Crankshaft-Driveshaft Balancing. Mail the coupon for your **FREE** copies TODAY!



BEAR

the most famous name in Heavy-Duty Service

BEAR MFG. CO., Dept. C-3, Rock Island, Illinois
Send my **FREE TRUCK SERVICE GUIDE** and the
Crankshaft-Driveshaft Balancing Case History Report.
(Write Name and Address in Margin Below)

Clayton

SERIES CT CHASSIS

DYNAMOMETER



DIESEL or GASOLINE VEHICLES

150 TO 800 H.P.

SINGLE OR MULTI-AXLE DRIVE

Here's the equipment to *accurately* measure performance under all driving conditions without leaving the shop! Handles all vehicles including medium and heavy duty trucks, single or multi-axle, of from 150 to 800 Road Horsepower with axle loadings up to 22,500 lbs. per axle. Complete FULL POWER tests can be made in a matter of minutes. Clayton infinitely variable load control duplicates road conditions at *any* speed, maintaining any desired torque load on gas, diesel, or L. P. G. engines.

The Clayton Series CT Chassis Dynamometer is indispensable in modern maintenance, overhaul, and service repair operations. Testing with this equipment assures accurate diagnosis, reduces road failures, cuts "downtime" delays, increases shop productivity, provides quality control for all performance-type repairs and maintenance checks, eliminates most driver complaints, assures specified performance and minimum operating costs. Write today for the Series CT catalog (form C-1045)

313



MANUFACTURING COMPANY
433 N. TEMPLE CITY BLVD.
EL MONTE, CALIFORNIA

Bus servicing

Continued from Page 106

lift for on-the-spot repairs. Here, a mechanic corrects minor items—such as lights or safety equipment—noted during the trip through the inspection lane.

The strong-weak "dog"

One last word about the service lane. Conveyor pulls bus by contacting a special "dog" affixed underneath the bus front end. It has two reinforcing members tied to the subframe just behind the front bumper.

Experience has shown that it must be rugged enough to withstand the initial shock as the conveyor picks up the full load of the bus from stopped position. Yet it must be weak enough to break if the system goes haywire along the line. The "dog" has met both tests.

Madison's operation

Madison Bus serves the city of Madison, Wis., with 69 buses, operating 117 route miles. The city, built on an isthmus between two large lakes, has a downtown section with no place to go.

Recent expansion, to the tune of about 125,000 in population now, has been on both sides of the isthmus. Result: Traffic congestion is critical enough to make a rather favorable situation for mass transportation. Perhaps a larger percentage of the citizenry ride buses than in most American cities.

In addition, Madison is home of the University of Wisconsin with its own resident population of about 30,000. Several bus routes now cater to student and faculty personnel—between home and college, parking lots and classrooms and various other sections of the campus. Football weekends generate a substantial volume in the charter bus business, too.

END

Please Resume Reading Page 117

MORE MILES ON THE ROAD...LESS STOPS IN THE SHOP WITH

Alemite Fleet Lubrication Equipment!



From rain and dust...from snow and slush...from pound and strain to stop and go...what a beating modern carriers take. And all that protects vital bearings and joints against weather and wear is a thin, tough film of lubricant. If this lubricant isn't applied right, in the right quantity, at the right places, the result is vehicle breakdown and costly repairs.

Alemite Fleet Lubrication Equipment exclusives solve this problem for you—easier, better and at lower cost. There are no slipshod jobs because of insufficient pressure. During important high-

pressure lubrication, Alemite's exclusive sealed, double-action pump provides faster pressure recovery than any other. This is just one example of the superior engineering you'll find in the entire line of Alemite lubrication equipment—equipment that will give you faster, longer-lasting service for fleet operation. And it is backed by unmatched warranty protection.

Other Alemite Money-Saving Products for Fleet Use... A complete line of the world's finest lubrication equipment for portable use and permanent installations, Electronic On-The-Vehicle Wheel Balancer, Spray-Kleen High Pressure Washing Systems and Centralized Lubrication Systems—all specifically made for fleets! See your Alemite supplier or write direct for a fact-filled catalog.



ALEMITE
DIVISION
STEWART-WARNER
CORPORATION

Dept. DG-51, 1850 Diversey Pkwy., Chicago 14, Ill.

Where you need top truck performance

MACK SHOULDERS

*We built it and we
stand behind it 100%
— Who else can
say the same?*



MADE BY MACK . . .

THE RESPONSIBILITY

Mack can provide you with top truck performance—performance unmatched by any other truck—because what goes into a Mack is *made by Mack* . . . has the full backing of Mack. Engines, clutches, transmissions, axles, drives and all other major components are made by Mack for Mack trucks alone . . . made to the highest standards of the industry to work together with maximum efficiency.

The perfect integration of components achieved by Mack results from the exclusive concept called Balanced Design. It is the basic reason why Mack—alone among truck manufacturers—does not have to split responsibility for its truck performance with outside suppliers of major components.

This is Mack's way of making sure you al-

ways get unqualified satisfaction . . . of being sure that every Mack on your job gives the best possible truck performance and maintains the longest prime of life.

So, whether you're hauling freight . . . building an expressway or moving rock . . . delivering furniture, fuel oil or ready-mix concrete . . . if it's the kind of work that means handling big loads at a profit—it's the kind of work for Macks.

Mack trucks on your jobs will give you the advantage of lowest cost of operation plus undivided responsibility for full satisfaction. Your nearest Mack branch or distributor will be glad to suggest the exact model to handle your jobs with utmost dependability and efficiency. Mack Trucks, Inc., Plainfield, New Jersey. Mack Trucks of Canada, Ltd., Toronto, Ontario.

IT'S PART OF THE LANGUAGE . . . BUILT LIKE A



MADE BY MACK . . . MADE BY MACK . . . MADE BY MACK . . . MADE BY MACK . . . MADE BY MACK

**"In all the years we've been running
on steel disc wheels, we've never had
an accident due to run-out,"**



Ryder runs over 4,000 trailers and tractors. They haul general commodities over fifteen states and do a lot of inter-lining (swapping trailers and loads with other lines). They put hundreds of thousands of miles on a trailer before it's retired from service, usually in six or seven years. Their tractors are replaced every 450,000 miles or about every four years. With all the straight hauling and inter-lining they do, Ryder replaces very few disc wheels a year.

Steel disc wheels are built to run hundreds of thousands of miles without getting



This mark tells you a product is made of modern, dependable Steel.

says D. D. Hodges, Vice President and Director of Maintenance, Ryder Truck Lines, Inc., Jacksonville, Florida. From his experience, Mr. Hodges states, "Steel disc wheels maintain their trueness. They give longer wheel life and they save labor. We save up to 30 minutes a tire change, over rim and spoke wheels."



out of round. They stay true because they're built with the strength of steel. Rims are roll-formed just like I-Beams. Discs are press-formed out of tough plate steel . . . the whole unit is specially designed for today's high-speed, long-range hauls where steel's inherent safety pays off. It's no wonder thousands of truckers have found that steel disc wheels give you the best run for your money.

USS is a registered trademark

United States Steel Corporation, Pittsburgh • Columbia-Geneva Steel, San Francisco
Tennessee Coal & Iron, Fairfield, Alabama • United States Steel Export Company



Nylon is fine
for stretch panties
but not for
no-stretch tires!

TYREX[®] RAYON CORD KEEPS MORE OF ITS STRENGTH THAN NYLON
AS HEAT SOARS . . . GIVES LESS GROWTH . . . MORE MILEAGE . . . BETTER
MATCHING ON DUAL MOUNTS.

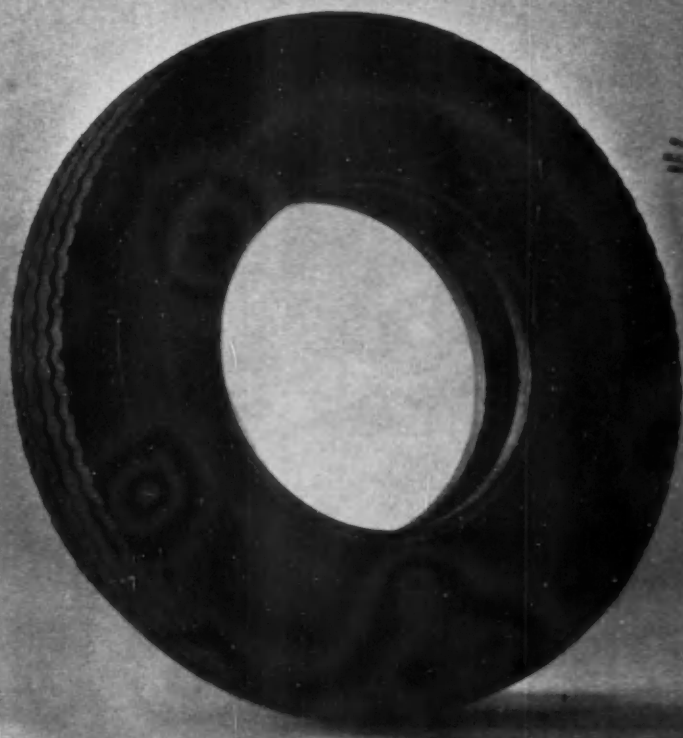
"Heat stretch" . . . caused by heat buildup from heavy loads and long hauls . . . is sure murder on tires. Nylon, a thermoplastic material, by its very nature is affected far more by temperature change than TYREX rayon cord. That's one reason why TYREX rayon in tires gives you 33% less growth than nylon. Result? . . .

LONG, MONEY-SAVING MILEAGE—40.2% more miles in continuing Texas fleet tests . . . (on tires made to sell in the same general level range) . . . with mileages now ranging from 80,000 to 100,000 miles!

EASIER MATCHING ON DUAL MOUNTS—Tires with excessive growth are hard to match, when single tires are replaced. They carry more load, wear faster.

TYREX INC., Empire State Bldg., New York 1, N. Y. TYREX (Reg. U. S. Pat. Off.) is a collective trademark of TYREX Inc. for rayon tire yarn and cord.

*"Is nylon stretch
shrinking your profits?"*



LESS GROOVE-CRACKING — This means TYREX rayon tire cord gets less exposure to damaging moisture, grit, chemicals.

So, if your cost-per-mile is rising because of short tire life, switch from nylon to TYREX rayon cord tires. Many fleets already have!

TYREX[®] rayon
TIRE CORD
AVOIDS NYLON STRETCH!

TYREX rayon tire yarn and cord is also produced and available in Canada.



RAY SMITH ASSOCIATED CO.'S SWITCHING TO TYREX RAYON TIRES. The fleet on which the above mileage tests are being made includes 383 tractors, 505 trailers that haul cement. Amazing test results have them switching!



SAVE \$414 per truck IN THE FIRST YEAR! NEW FORD ECONOLINE VANS

Now, you can save \$312 to \$433 in price* alone on a Ford Econoline Van compared to old-style half-ton panels. In addition, you can save over \$100 every 16,000 miles you drive!

These savings come with a man-size truck. The Econoline's cab-forward design with welded "body-frame" gives bridge-like strength and reduces dead weight to haul a full $\frac{3}{4}$ -ton. Only 14 feet overall, Ford Econolines are nimble in traffic, easy to park, need less garage space. Big 4-ft. door opening (both curbside and rear) and level cargo floor provide new loading ease . . . new load workability.

Special Note To Pickup Owners: Now, you can protect your loads from weather and theft with an Econoline Van . . . yet, pay less* than for most conventional $\frac{1}{2}$ -ton pickups. And you can get the same \$102 savings on operating expenses as shown at the right.

*Based on a comparison of latest available manufacturers' suggested retail prices



HERE'S HOW YOU SAVE

SAVINGS ON OPERATING EXPENSES EVERY YEAR!

GAS—Econoline trucks can give 30% better gas mileage than conventional ½-tonners. Figuring 16,000 miles per year at prevailing gas prices, you save.....

\$70

OIL—Crankcase capacity is only 3½ quarts instead of 5 quarts, and the recommended oil change interval is 4,000 miles versus 2,000 miles. In 16,000 miles you save.....

\$13

TIRES—Econoline tires last longer, cost less to replace. Prorated saving for 16,000 miles as high as \$53. Typical saving.....

\$16

LICENSE—In many states (not all) the license for an Econoline costs appreciably less—up to \$30.40 per year. Average for all states is.....

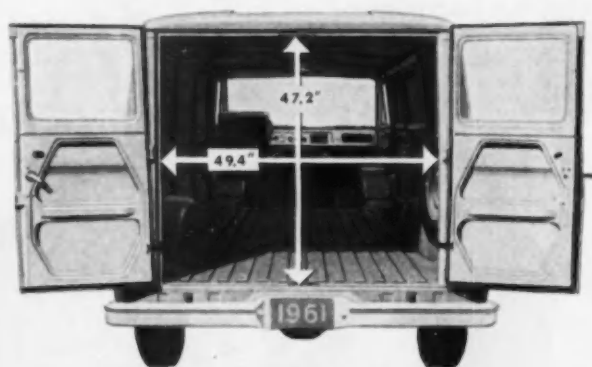
\$3

\$102

SAVING ON PRICE—You can save \$312 compared to even the lowest-priced conventional ½-ton panel—and up to \$433 against others! Saving at least.....

\$312

TOTAL FIRST YEAR SAVINGS... \$414
and you keep saving
\$102 EVERY YEAR!



NO REAR ENGINE HUMP!

The Econoline's "up front" engine leaves a level, knee-high floor almost 9 ft. long. There's no awkward rear-engine-housing hump to shrink the back entrance or hinder loading. And the Econoline Van provides over 204 cu. ft. of loadspace... up to 57 cu. ft. more than conventional ½-ton panels.

FORD TRUCKS COST LESS

SEE YOUR FORD DEALER'S "CERTIFIED ECONOMY BOOK" FOR PROOF!



FORD DIVISION, *Ford Motor Company*

it's
new and,
it's *exclusive!*



Super Brake Fluid drum becomes reservoir with this **HANDY, Low-Priced BRAKE BLEEDER***



INDIVIDUALLY PACKAGED IN THIS ATTRACTIVE COUNTER DISPLAY UNIT—complete with ready-for-use 6-foot hose, spare gaskets and simple instructions. Other adapters for all cars, quick-disconnect couplers and extension hoses are also available.

SAVE MONEY! Buy the brake bleeder in combination with either Super 500 or Super 703 Brake Fluid!



ONE PULL-UP STROKE (no air needed) — builds up charge required to bleed an average car or panel truck!

SAVES FLUID — prevents spilling and waste!

KEEPS FLUID CLEAN — bleeder becomes "lock, stock and barrel" of the can — keeps contents free of contaminants!

A "MUST" for power brakes and clutch controls!

UNIVERSAL 3-THREAD ADAPTER — fits 85% of cars and trucks!

NO-DRIP HOSE END FITTING opens and closes with a twist — prevents fluid leaks!

ONE-MAN OPERATION eliminates "pedal-pumping" — saves expensive man-hours!

CONTENTS FILLS AND BLEEDS up to 40 vehicles!

Ask your EIS Distributor or write
EIS AUTOMOTIVE CORP.,

for Bulletin 30H-10.
Middletown, Conn.



*PAT. PENDING



PDQ High Cube "C" Series, ideal for package delivery. Full line includes models for every type wholesale or retail operation.

87 stops so far today and it's only midafternoon. This is the kind of workability that makes the PDQ so profitable. Unloads easily, front or back. Low-step cross-aisle, swivel seat, with full headroom. Translucent skylight. And the PDQ is so maneuverable, it outturns most passenger cars. Result: more stops per day. Here's more:

1 NO DOWN TIME. PDQ engine is mounted on unique, removable power-dolly unit. Replace it with a spare in 90 minutes, do a complete engine overhaul while truck stays on road. Fewer spare trucks needed.

2 ECONOMY. Silver-Saver 4- or 6-cylinder engines are easy on gas, easy to maintain, proven in rugged multi-stop service. Positive crankcase ventilation cuts carbon buildup and reduces exhaust fumes.

3 RUGGEDNESS. Unitized body is bolted to heavy-duty frame. One-piece fiberglass roof won't leak. Optional fiberglass side panels. Heavy-duty clutch, transmission, brakes handle toughest loads.

P D Q
PICK-UP DELIVER QUICK

THE WHITE MOTOR COMPANY
PDQ Division • • • Montpelier, Ohio

The White Motor Company, PDQ Division Montpelier, Ohio

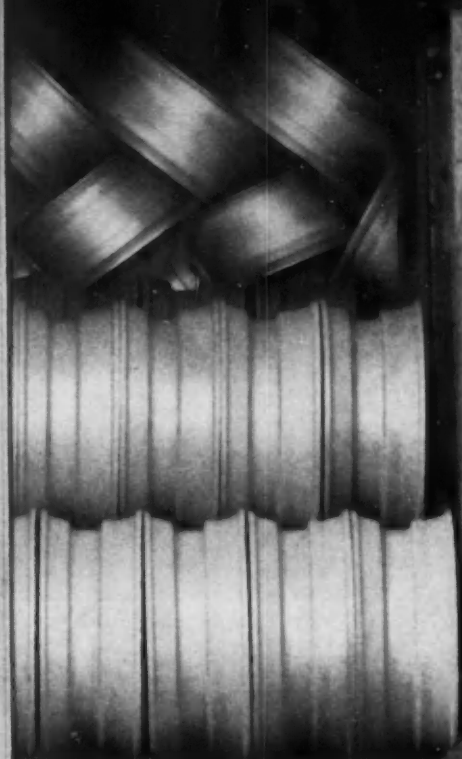
Please send more information on the new White PDQ.

Name _____ Company _____

Business Address _____

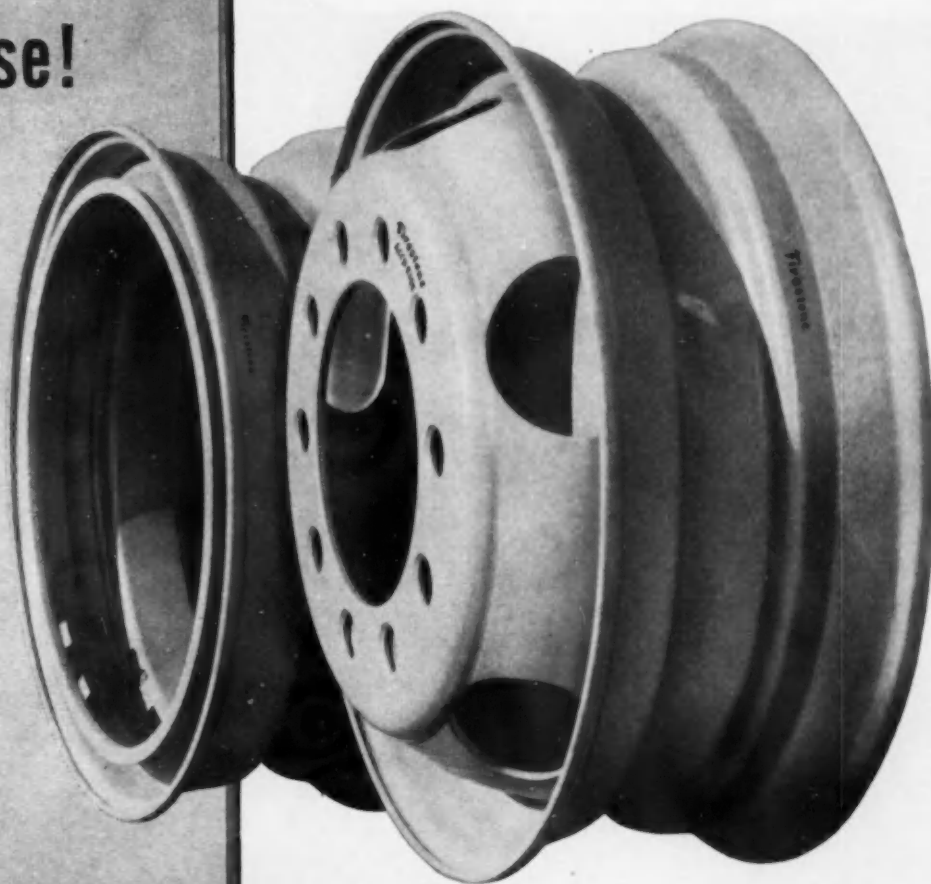
State _____ City _____ Zone _____

**Who builds
the world's
roundest, truest
wheels and rims
for every truck,
trailer and bus
on the road?**



CT60 269

Firestone, of course!



Firestone brings you the only complete line of steel wheels and rims on the market . . . the only line designed, engineered, tested and produced under one roof! And Firestone rims and wheels are backed by 52 years of manufacturing experience. Here are more reasons why they're your best bet for replacements and new equipment too:

Perfectly balanced ACCU-RIDE® WHEELS AND RIMS

- Cut wheel bounce and wobble
- Seal out rust and corrosion
- Provide extra strength
- Boost payloads.
- Roll truer
- Protect tires
- Give extra tire miles

Here's how Accu-Ride Wheels cut wheel bounce and wobble to give extra tire miles.



For new engineering and test data on Firestone Wheels and Rims, write Dept. 43(5).

Firestone

STEEL PRODUCTS COMPANY, AKRON 1, OHIO
INTEGRITY, QUALITY, ACCURACY, DEPENDABILITY

Copyright 1961, The Firestone Tire & Rubber Company
Tune in Eyewitness to History every Friday evening, CBS Television Network

for rough, tough city hauling **THIS**



P-62
City Delivery Van

This rugged new Trailmobile City Delivery Van is actually designed for the most important haul of all—to deliver *more* of your revenue into the profit column. This is because the new design offers exceptional strength and protection at all points where city vans normally take abuse, suffer damage and require frequent and expensive repair. And when you sharply reduce costly maintenance and downtime, you're bound to come up with more appealing profit figures.

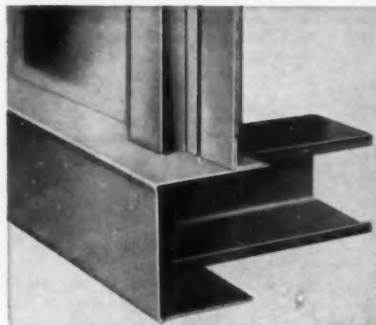
Check over the significant improvements discussed at right and see if you don't agree that "this one's got it for profit."



TR-911

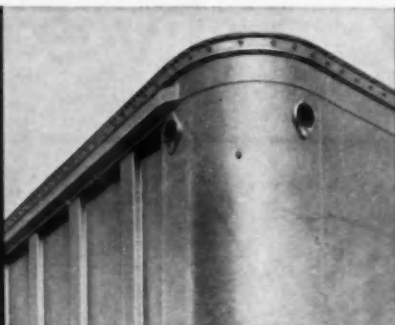
ONE'S GOT IT FOR PROFIT!

The Trailmobile P-62 City Delivery Van



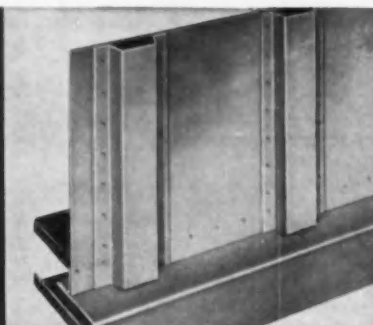
More strength at the outer rail! (GOT IT FOR PROFIT!)

A hefty new 8-gauge outer rail (about $\frac{3}{16}$ " thick) extends out $2\frac{1}{8}$ " from vertical side posts to give solid protection against damage in tight loading quarters.



More protection in the top rail! (GOT IT FOR PROFIT!)

A husky 10-gauge skid rail solidly secured to vertical posts adds rigidity and protects quarter panel and sides against damage from hard-to-see overhead obstructions.



More strength in the side panels! (GOT IT FOR PROFIT!)

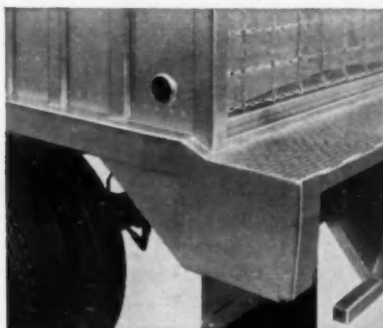
New extra-thick 16-gauge side panels utilize Trailmobile's famous integral post construction to provide the toughest side wall ever offered. Steel side sheets overlap to form integral posts on 12" centers.

Convenient Chain Gate and Curtains

—Trailmobile's easy-to-operate chain gate provides a pilfer-proof rear end closure. Both chain gate and heavy-duty, water repellent curtain are standard equipment.

Deeply Recessed Lights—Rear end lights are recessed 8" to protect against breakage. For further savings, lights contain new 5000-hour bulbs.

Improved Landing Gear—The P-62 uses Trailmobile's new easy-to-operate landing gear, which features a longer crank handle, pre-lubricated legs and an improved transmission.



More protection at the rear! (GOT IT FOR PROFIT!)

Full width rear end protection for the P-62 is unequalled in the industry. The assembly includes a sturdy 12" tail shelf covered with a heavy-duty 10-gauge tread plate and two heavy-duty cast steel corner bumpers to protect the corners from dock damage and other accidental shocks.



More strength in the underframe! (GOT IT FOR PROFIT!)

In the new design top flange, bottom flange and web of the cross bolsters are welded to the outer rail to provide a secure 3-point fastening that strongly resists the tendency of the bolsters to rotate during braking or acceleration.

TRAILMOBILE INC. Cincinnati 9, Ohio • Springfield, Mo. • Longview, Texas • Fremont, Calif.

COMMERCIAL CAR JOURNAL

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| Heat control | Profitable fleets measure successful cost-cutting in mills-per-mile-per-vehicle. That's why CCJ has made special arrangements to bring you a report on engine heat control. It tells what you can do . . . and what you can save in fuel use and in longer engine life. |
| Accident costs | Continuing CCJ's Fleet Manager's Guide series, Karl Schulze (senior safety engineer, Standard Oil of California) lists and explains 20 not-so-readily appreciated accident costs. |
| Painting | You'll find a 5-page "troubleshooter" you can use to boost the efficiency of your paint shop. Carefully illustrated, it gives the cause, cure and prevention when vehicle paint jobs go sour. |
| Maintenance intervals | Maintenance intervals are often debated . . . and facts are hard to come by. Here's the result when Washington fleetmen grouped theirs. You'll find charts covering over-the-road, utility and logging fleets. |
| Charter dollars | Transit properties look for "extra" income to keep them in the "black." Charter services are one way it's being done. This cross-country round-up may give you some ideas on how to find that added revenue. |
| Vehicle utilization | Are you getting the most out of your vehicles? Oscar Horvitz, Spector Freight System treasurer, tells how to set-up your records to spot the lazy ones . . . and get the most from dollars invested. |
| 50 years experience | When Halle Bros., Cleveland, Ohio, department store switched from horses and wagons to trucks some 50 years ago, it started using trip travel time recorders . . . and still finds them a valuable fleet tool. |

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3

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in publications for fleets

"Doyle Report" on the national transportation policy is available for fleet operators. It's the preliminary draft as prepared for the Committee on Interstate and Foreign Commerce of the U. S. Senate. Cost is \$2 a copy. Write directly to Supt. of Documents, U. S. Government Printing Office, Washington 25, D. C. Ask for Catalog No. Y 4.In 8/3:T 68/28.

Use and care of handtools and measuring tools is explained in an Army manual now available as a reference for fleet shops. Write directly to Supt. of Documents, U. S. Government Printing Office, Washington 25, D. C. Ask for Catalog No. D101.20:21-76. Cost is \$1 per copy.

Regulations and rules governing transfers of rights to operate as a motor carrier in interstate or foreign commerce are now available in the 1960 edition. Write directly to Superintendent of Documents, U. S. Government Printing Office, Washington 25, D. C. Ask for Catalog No. IC 1 mot. 6:T 68/960. Price: 10¢ a copy.

Turn over. You'll find many more interesting reports for fleets on the other side

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118	138	158	178	198	218	238	258	278	298	318	338	358	378	398	418	438	458	478	498
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in publications for fleets

**It's easy to get more details about the items described.
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Pickup truck comparisons are made on 11 American-built 1961 models in a paper from Dodge called "Close-Up On Pick-Ups."

For free copy, circle 460 on card

Business gifts and advertising specialties are shown in a compact catalog from Marvic Advertising Corp., Brooklyn, N. Y. Unit and quantity prices are given with photos of over 500 home, office and promotion items.

For free copy, circle 461 on card

Aluminum bodies for Ford parcel delivery units are shown in a new brochure from J. B. E. Olson Corp., Garden City, N. Y.

For free copy, circle 462 on card

Bulk handling containers called Tote Bins are discussed in a 4-page bulletin from Tote Systems, Inc., Beatrice, Neb.

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Expanded highway program is subject of a publication titled "Businessmen's Guide to the Road Program" from U. S. Chamber of Commerce. It concerns the basic concept of the plan and its effect on various areas of the country.

More details? Circle 449 on reply card

Downtown traffic improvement procedures are discussed in a publication titled "How to Get the Most Out of Our Streets." It's offered by U. S. Chamber of Commerce.

More details? Circle 448 on reply card

Indianapolis 500-mile race—its history from 1909 'til today—is shown in a new 312-page illustrated text from Coward-McCann, Inc., New York City. "500 Miles to Go" is offered in connection with the Golden Anniversary running of the "500" on May 30 this year. Cost is \$5 a copy. **More details? Circle 447 on reply card**

Talk to help fleet safety men bring the message home to the men behind the wheel is offered by National Safety Council, Chicago. Titled "how to get back on?," Talk No. 13 is from a new book of safety messages aimed at professional drivers. The book, "Five Minute Talks for Driver Supervisors," is written by Donald S. Buck, authority on driver training and safety and author for COMMERCIAL CAR JOURNAL.

To get your free copy, circle 476 on reply card

1961 Pure Truck Station Directory is now available from the Pure Oil Co., Palatine, Ill. It shows all Pure truck stops across the country, plus credit exchange stations and State truck-trailer size and weight restrictions.

To get your free copy, circle 477 on reply card

Summary of federal and state activity in highway transportation legislation in 1960 is offered by National Highway Users Conference, Washington, D. C.

To get your free copy, circle 478 on reply card

Participate in the 1961 National Vehicle Safety Check Program conducted in May and June this year. To get more details on the "Circle of Safety," write directly to Auto Industries Highway Safety Committee, 2000 K St., NW, Washington 6, D. C.

"What's ahead for highway transportation in this space age?" is an informative talk offered in booklet form by United States Rubber Co., New York City.

To get your free copy, circle 479 on reply card

1961 edition of the National Tank Truck Carrier Directory has been announced by National Tank Truck Carriers, Inc., Washington, D. C. **For further details, circle 470 on reply card**

National Fire Code standards for 1960-61 are available in seven volumes. Each deals with a single feature or group of related features of the overall fire protection problem. These include: Volume I—Flammable Liquids & Gases; Volume II—Combustible Solids, Dusts, Chemicals & Explosives; Volume III—Building Construction & Equipment; Volume IV—Fixed Extinguishing Equipment; Volume V—Electrical; Volume VI—Transportation; Volume VII—Mobile Fire Equipment, Organization & Management. For more information write directly to the National Fire Protection Assn., 60 Batterymarch St., Boston 10, Mass.

Training and testing drivers in the classroom with the Aetna Drivotrainer system (June '60, Page 108) is explained in a new brochure from Rockwell Mfg. Co., Pittsburgh, Pa. **For free brochure, circle 480 on reply card**

"Gasoline Exhaust Fume Exposure for the Lift Truck Driver" is the title of a report (No. 107) just issued by Oxy-Catalyst, Inc., Berwyn, Pa. Tests made at Franklin Institute are described with explanation of effect of gasoline exhaust fumes on the vehicle driver. **For free copy of report, circle 481 on reply card**

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